

BOOKS Printed for T. Cox.

7 *EMMENOLOGIA*, written in *Latin*, by the late learned Dr. *J. Friend*. Translated into *English* by *T. Dale*, M.D.

N. B. These two Volumes contain all the *Practical* Treatises writ in *Latin* by that Author.

A Treatise on the Venereal Disease, and its Cure in all its Stages and Circumstances. By *Herman Boerhaave*, Professor of Physick in the University of *Leyden*. Translated into *English* by *J. B. M. B.* of *Christ-Church College, Oxon.* Price One Shilling.

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NINE
COMMENTARIES
UPON
FEVERS:

And Two EPISTLES concerning the
SMALL-POX,
Addressed to Dr. MEAD.

Written, in *Latin*,
By the late Learned Dr. JOHN FREIND.

Translated into *English*,
By THOMAS DALE, M. D.



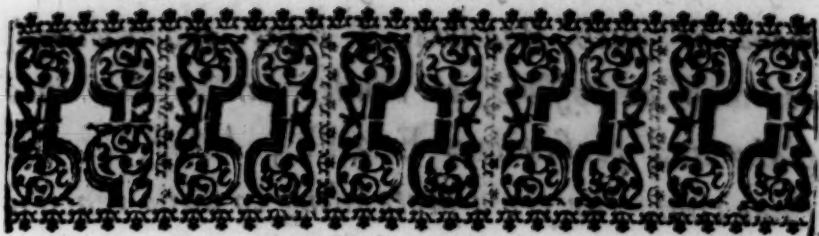
L O N D O N :

Printed for T. COX, at the *Lamb* under the
Royal-Exchange in *Cornhill*. M DCC XXX.

NINE
COMMENTARIES
UPON
FEVER:
SMALL-POX
Alfred C. Thompson



LONDON:
Printed by T. C. ...
... in Great Britain



THE
Translator's PREFACE.



THE Translation of the EMMENOLOGIA has been so well receiv'd by the Publick, that I am encourag'd to publish this other Volume, which contains the remaining Practical Treatises in Latin by the same Author.

The following Pieces in the Original have received such deserved Applause from the learned World, that no one can be a Stranger to their Merit or Reputation, tho' he may not be able to read them with so high a relish as he could

The Translator's Preface.

wish. For the Use therefore and Entertainment of such Readers, I have endeavoured, as much as possible, to render our Author into plain and perspicuous English; being, at the same time, far from pretending to have reach'd the singular Beauties of the Latin. Dr. Freind, it must be confess'd, has, both by his Writings and his Practice, done eminent Service to his Country, and Honour to his Profession; and, with very great Justice, may we ascribe to him what Celsus affirmed of Hippocrates, that He was *Vir & arte & facundia insignis*.

It is remarkable, and very much to be lamented, that some of the best Writers in our Faculty have had the ill fortune to be abused by a miserable Translation. I am not so arrogant as to think that mine cannot receive any Alteration or Amendment, tho' I flatter myself I have already been so far serviceable to the Publick as to have prevented a worse of the *EMMENOLOGIA*. Happy could I succeed as well now!

In the former Part of this Volume are contained several Commentaries upon Fevers, accommodated

The Translator's Preface.

comodated to the first and third Book of Hippocrates's Epidemicks: In these the Reader will be sure to find more light into the Doctrine of Fevers, and their Methods of Cure, than he can possibly receive from turning over whole Volumes of a much larger Bulk.

The Second Treatise is an Epistolary Dissertation addressed to Dr. Mead, being a Vindication of the Seventh Commentary, wherein our Author had endeavoured to shew the advantage that may arise from Purging in the second Fever in the confluent Small-Pox. This Method of Cure was indeed objected to as novel and unusual, as well as Irrational: Which Imputation the Doctor has endeavoured to remove, by shewing it to be not only highly consonant to Reason, but to the Practice and Opinion of the most celebrated Writers of Antiquity; and has also given us the History of some Cases from his own Knowledge, and others, communicated to Him by some of His learned Friends, wherein this Method had been persued, in order to illustrate and establish this Doctrine.

Here

The Translator's Preface.

Here too the Reader will find a very learned and exact History of the Small-Pox, as it lies in the Arabian Writers, who first observed and described this new and surprising Distemper; it having been entirely unknown to the Greeks. This Enquiry, as it must necessarily afford very ample Entertainment to every Person of the least Curiosity, so likewise is it a Matter of the greatest Importance.

The third and last Piece is also an Epistle addressed to the same excellent Practitioner, wherein the Doctor has described some particular Species of the Small-Pox; and solicited His Learned Friend to oblige the World with those curious and accurate Observations upon this destructive Evil, which He has been furnished with, either from a perfect knowledge of the ancient Writers, or a happy and extensive Practice.

It may be here observed, to the Honour of Dr. Freind, that, unhappily falling under the Displeasure of the Government, He wrote this Epistle in the Tower; at once for the Service
of

The Translator's Preface.

of Mankind, and the amusement of his solitary Moments; being unwilling to lose any opportunity of employing his Time to the best Purpose.

To conclude; as this Undertaking, however difficult, hath afforded me a very agreeable Entertainment and Diversion in my leisure Hours, so I promise myself the Acknowledgments of my English Readers, for furnishing them with the means of sharing the same Pleasure, and the same Advantage.



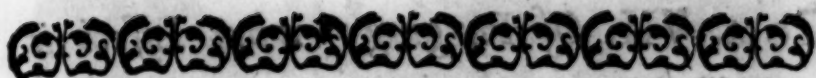
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COM-



Commentaries on Fevers.

COMMENTARY I.

Of the manner of writing which Hippocrates observed in his Books of Epidemick Diseases.



IPPOCRATES, as he wrote every thing well, so has he left us nothing more entertaining or better adapted to Practice than these Books of epidemick Disorders. For in these Writings only he delivers the particular Histories of Diseases; which he paints, indeed, in so exquisite a manner, that his Readers seem to be both present with the Sick, and to observe themselves what Nature indicates in each of them.

A general description of Diseases, however full and accurate it may be, is so much the less serviceable in forming Conjectures of the method of Cure, because there is neither an universal congeries of Symptoms found in any one Sickness, nor the same conjunction in different:

ferent: besides the difficulty of judging in this case is encreased, in as much as those very Symptoms which are not in the least dangerous in one Person, are very often in another the fore-runners of death. Hence it is, that those Precepts which are delivered in the general, concerning these Distempers, sometimes either direct the Physician not at all, or else lead him into an error. But in the Cases of the Diseased, which are particularly related, it happens otherwise: for from hence we learn not only the various nature of the Disease itself, but also the force and seasons of every Symptom, as well as what method of Cure may be made use of through the whole course of the Distemper.

This is abundantly proved by *Hippocrates* in these Commentaries; who, as he must be allowed to be the most antient, so also the most accurate in this kind of writing. For he was a Person, according to *Celsus's*^a Judgment, remarkable not only for his Skill, but his Eloquence. *Galen*^b indeed having supposed that *Hippocrates* drew up this account of popular Diseases as a memorial, confesses at the same time that they were composed with a design to be published. And without doubt they were highly worthy the regard of the Publick. There are some things perhaps, as *Galen* observes^c, which *Hippocrates* has not touched upon, as being something foreign to his purpose: but whoever shall peruse this Work with any degree of Judgment, will find nothing omitted

^a *Præfat.*

^b *Gal. in 6. Epid.*

^c *Ibid.*

omitted whereby the signs of Diseases may be distinguished, or the method of Cure may be deduced. He wrote indeed like a Master, in a short and concise Stile, but polite and known to every intelligent Person.

Upon this account, therefore, the *first* and *third* Books of *Epidemics*, which are esteemed the only genuine ones of the *seven*, can never be enough admired. I was willing to join these together, not only because they are writ with the same elegance and clearness of Stile, but because they treat of the same Subject, and form one complete Work. For whoever will thoroughly examine the twelve Cases delivered in the beginning of the *third* Book, will easily perceive that these Persons laboured under the same Disease, as those, who are mentioned in the *first*, and ought therefore to be referred to that constitution of the Air, which is there described. So that these Books, according to the advice of *Galen*, ought to be connected, upon account of the Agreement of the Subject.

There is also another Reason, which should greatly recommend these Books to the Studios in Physick, which is their being wholly employed in treating of *Fevers*. For this kind of Disorder, as it is more common than the rest, so upon account of the malignancy, its Symptoms stands in greater need of the Skill of the Physician. Some Diseases rage either in some particular Place or Age: Fevers are almost the only ones which are common to all Nations and to all Ages. So that *Hippocrates*

with great reason gave this Discourse of Fevers the name of *Epidemicks*. This is also worthy to be observed, that when the constitution of the Year was very different, as is remarked in the *first* and *third* Books, the species of Fevers was almost the same, and suggested the same method of Cure.

Fevers no ways unlike these which *Hippocrates* describes, have arisen in every Season, and will, I believe, arise: which is evinced from the Writings of all Authors, especially those of *Sydenham*. This Person deservedly following *Hippocrates's* method, has diligently and accurately described the Fevers which prevailed in every Season of the Year, of which Work, however, give me leave to say, that, though *Thasos* differs extremely from *England*, both as to the Climate, and the Constitution of the Air, there is not the least difference in the Fevers described both by him and *Hippocrates*. I believe also I may truly affirm, that those very Fevers, which *Sydenham* explains as distinct Species, according to the various temperature of the Seasons, do not differ much from one another. For, if perhaps you should except the *Petechial*^a, they differ rather in *degree* than in *kind*. There hardly ever appeared a Fever in any Season, where the Signs so constantly answered one another, that those which you found collected in one Person, should unite after the same manner in another: however upon this account you would not deny their

^a *De Morb. acut.* 216.

their labouring under the same Distemper. And that this is true, his method of treating these Diseases may be alledged as a proof: for I observe, that almost the same method of Cure is accommodated to all the *eight* species of Fevers, which are distinguished by this Gentleman. So far was he from proceeding upon different methods of Cure. He tells us indeed, *That the continual Fevers were so widely different, that the same method which relieved the Patients at the beginning of the Year, towards the end of it might possibly carry them off*: but if we should consider the *method*, which this Writer pursued in the curing these Fevers of a kind, (as he imagined so very dissimilar,) and in which he greatly excelled, we shall find no appearance at all of this matter. So superfluous for the most part is every over nice distinction, and of so little service to the Students in Physick especially, that it rather leads them into an error; inasmuch as they falsely imagine, when they find any certain peculiar sign affixed to any Distemper, that the method of Cure must in like manner be particular.

I would be understood to have said this, lest any one should imagine, that what *Hippocrates* has wrote so excellently upon Fevers, does not in the least relate to us, as being confined to another Climate and another Species of Men.

As he has shown, especially in these Writings, how great a Master of Medicine he is:

B 3

I shall

I shall not, I hope, seem to have mispent my Time in explaining the same, if I can shew in a few Words what general Effects these Examples of *Hippocrates* have in the treatment of all acute Fevers, and how very easily they may be adapted to our own Use. For I do not profess myself a *Translator* of *Hippocrates*, let them enjoy the Praise who have undergone so difficult a Work: Indeed many ingenious and learned Men have not contented themselves with explaining faithfully the Words and Sentences, but have also diligently compared them with the other places of *Hippocrates*: Among whom *Foësius* deservedly challenges the first share of regard. *Galen* has indeed wrote an entire Commentary upon these Books of *Epidemics*; in which however his only aim seems to have been to deliver the Doctrine of those Days, which the *Greeks* call *Critical*, and to confirm it chiefly by this Authority. Even in those Books, which he drew up about difficult Breathing, he related and illustrated all the Histories of the Sick from the *first* and *third* Book of *Hippocrates*; yet in such a manner as to meddle only with those things which had any relation to the Breath.

I propose to myself a far different End, and persue quite another Path: Having that only in my sight, which I find to be wholly passed over by others, to shew that those Indications of Cure may be derived from this Fountain which are so much wanted in acute Fevers. *Hippocrates* has handed down to us *two* and
forty

forty Cases of Persons labouring under an acute Fever: Of these *five* and *twenty* died; of those which escaped, no one recover'd his Health without some intervening *Evacuation*. Hence it clearly appears, what Nature attempts in removing these Disorders, and which way Art should proceed, which ought to be directed according to the rule of Nature.

That I may therefore dispatch this Affair in as few Words as possible, give me leave to run over all the *Evacuations*, by which these Fevers were carried off: And then subjoin what have been found by Practice and Observation concerning the principal kinds of Evacuation, as far as they chiefly regard the Art of Healing. The kinds of Evacuation which *Hippocrates* mentions in these sick Persons are *seven*.

For they are occasioned,

1. By an *Eruption of Blood*; as in Book 1. Case 7. B. 3. Sect. 2. Cases 7, 11, 12.
2. By *Sweat*, as B. 1. Cases 3, 6, 7, 13, 14. B. 3. Case 3. Sect. 2. Cases 6, 7, 8, 10, 12.
3. By *Vomiting*. B. 1. Case 13.
3. By an *Abscess*. B. 3. Case 1.
5. By *Spitting*. B. 3. Case 1. Sect. 2. Case 8.
6. By *Urine*. B. 1. Case 6. B. 3. Cases 1, 5. Sect. 2. Cases 6, 9, 10.
7. By a *Looseness*. B. 1. Case 10. B. 3. Case 3. Sect. 2. Case 9.

It is worth while to observe what *Hippocrates* ^a often remarks, and what that excellent Author *Lommius* ^b, tho' writing on another

B 4

^a Lib. 1. 17.

^b Lib. 1. 39.

ther Subject, draws from him, *That the solution of a Disease by several Evacuations, is not always perfected by one only; as if it should begin in a burning Fever by a Bleeding at the Nostrils, it is afterwards finished and completed by a profuse Sweat, as B. 1. Case 7. B. 3. Sect. 2. Cases 3, 7, 11, 12.*

But before I begin upon our Subject proposed, it may not be amiss to preface a few things concerning the manner of Cure, which *Hippocrates* followed in these Fevers. He very rarely indeed makes mention of any Remedies: In B. 1. Case 1. B. 3. Case. 7. Sect. 2. Case 3. we read that a *Clyster* was prescribed: In B. 1. Cases 1, 4, 5. B. 3. Cases 3, 7. a *Suppository*: In B. 1. Case 7. the *Washing of the Head*: In B. 3. Sect. 2. Case 8. we find that *Fomentations* were applied, and that a *Vein* was opened. In the others what kind of Medicine was made use of, *Hippocrates* is altogether silent: Unless, perhaps, we understand with *Mercurialis* those *Stools* in B. 1. Cases 2, 12. which came down by *irritation* to be occasioned not by the natural Acrimony of the Humors, but by the help of some Medicine. What relates indeed to those two Patients, who were thrown into a Fever by a Surfeit, and who had some small discharge almost daily by loose Stools, there seems to have been room for some Physick, which might move the Belly.

Being induced by this silence of *Hippocrates*, some Persons contend that he made use of no other means of Cure than what are mentioned
in

in each Case, and that he therefore wrote the Commentaries of the *Epidemics*, that he might leave them as a Sample of his Method of treating Fevers. But this Opinion is refuted by *Hippocrates* himself, who expressly tells us, even where he says nothing of the kind, that Medicines were applied, as when he writes B. 3. Case 9. Sect. 2. Case 5. as in a desperate Case, that *nothing was of any service*. Therefore if we would know what Method of Cure he undertook in every kind of Distemper, we must learn it from his other Writings.

But that we may be fully satisfied upon this Subject, let us produce the Opinion of *Galen*, who was extremely well versed in the Medicine of *Hippocrates*.

“^a But because not only in Pythion, but also
 “ in many other Patients, who seemed, by what
 “ we can conjecture from his Writings, to require Bleeding, we do not find that he prescribed it, we must necessarily conclude, either
 “ that these Persons were not blooded, or that
 “ he omitted mentioning this means of Relief.
 “ But that neither of those Persons, who required it, were blooded, is improbable, since
 “ he was a favourer of that Remedy; as he has
 “ told us in his most genuine Books, in the *Aphorisms*, in his Book of Diet in acute Diseases, in his Book of the Joints, and in this
 “ very third Book of popular Diseases, where
 “ he writes in this manner of one of the Diseased: On the eighth Day I opened a Vein
 “ in

^a Comment. in Epid. 3. 1.

“ in the Arm, and took away a large quantity
 “ of Blood, as it was necessary. For since he
 “ bled him on the eighth Day, we should much
 “ rather suppose that he made use of this Re-
 “ medy on the former Days. But that he has
 “ not mentioned it in all the Cases, where he
 “ prescribed it, is improbable, since he relates
 “ lesser things than that, even the putting up
 “ a Suppository. Therefore, if at any time the
 “ relation is absurd on either side, the lesser
 “ absurdity is to be chosen. I imagine indeed
 “ that a Remedy was prescribed in many Cases,
 “ which was omitted in the relation as clear.
 “ Which I am led to believe chiefly from what
 “ has been said in those Cases, where the Per-
 “ sons were bled on the eighth Day. For
 “ he wrote this as a rare thing; and passed by
 “ Bleeding before the eighth Day as customary.
 “ But if in his authentick Writings, during
 “ any violent Disease, he always orders Blood-
 “ letting, at the same time regarding always
 “ these two things, the Age as well as the
 “ Strength of the Patient: And in these very
 “ Books of vulgar Diseases, he says, He let one
 “ Blood on the eighth Day; we can imagine
 “ nothing else, than that this Remedy was not
 “ omitted in the Patients, but passed over in
 “ the relation as a thing clear. Wherefore since
 “ the relation regards all the sick Persons, let
 “ it be sufficient once to have mentioned Bleed-
 “ ing, as also every thing else which is common.
 “ And he tells us plainer in another place, * that
 “ Hippo-

* Comm. in Epid. Lib. 3. Sect. 3. 8.

"Hippocrates mentions the Bleeding this Per-
 "son in the Cases described in the first and
 "third Book, not as if he was the only one who
 "was blooded, but as on the eighth Day only.
 "For then the Physicians, as it were by a cer-
 "tain Law, opened not a Vein after the fourth
 "Day. Since then this Person was blooded on
 "the eighth Day, we may certainly conclude
 "that many others, who required Bleeding, were
 "so ordered the second, third, and fourth Days.
 "But Hippocrates passed this over in silence as
 "he did all other Remedies; however he was
 "sometimes under a necessity of telling us that
 "his Patients received no advantage from any
 "thing that was given them, that he might
 "suggest the Malignancy of the Distemper: For
 "he did not intend to give us any Method of
 "Cure, but some light into the Doctrine of
 "Prognosticks."

Thus far Galen. To which I will add one
 thing, that I can never be persuaded to believe,
 that Hippocrates neglected opening a Vein in
 that Woman, v. g. B. 3. Case 7. which la-
 boured under a Quinzy for five Days, who
 tells us, that in this Disorder the ^a Patient will
 be suddenly suffocated, unless immediate Relief
 be brought, and the Veins in the Arms and un-
 der the Tongue be opened. Is it not very pro-
 bable that he did it in violent Fevers and phre-
 nitick Disorders, with both of which this Dis-
 course is almost wholly taken up, when he
 has told us a thousand times, that whenever
 any

^a Vill. acut. 32.

any Inflammation appears, there can be no hopes of Cure, without loss of Blood? In the *pleuritick* ^a Person likewise, who was not freed from his Fever before the thirty fifth Day, did he do nothing but open a Vein *once*? Or in the *Lying-in* ^b Woman, whom we read to be indisposed with a slight Fever for fourscore Days, did he order nothing but a *Suppository*? Or lastly, in that Person, who was afflicted with a *burning Fever* ^c, and laboured under it to the hundred and twentieth Day, did the Father of Physick prescribe nothing, who in his other Writings has treated of so great a variety of Medicines? Let us rather suppose, that *Hippocrates*, who was so thoroughly acquainted with the power of Medicine, never omitted it, when there was any probability of success from it; that he followed Nature as his Guide, but yet followed her in such a manner, as to call in the Assistance of Art according to the necessity of the Case. For what need is there of a Physician, if every thing ought to be left to Nature? Or for what reason should this Art be called the Guardian of human Health, if Diseases were always cured of themselves? Fevers indeed are what cannot, by any means, be ended of themselves, and what stand in the utmost need of the Physician's Advice: Even in those, which are wont sometimes to vanish through length of Time, the treatment of Art has this Effect, that they become shorter, and are carried off in a more easy

^a Lib. 3. Sect. 2. Aeg. 8.

^b 1. 3.

^c 3. 1.

easy manner. I shall therefore discourse briefly upon the most remarkable means of Relief in these kind of Disorders, which are either pointed out by Nature, or invented by Art; for it is not my design to write a whole Volume of Physick, but to touch only upon those things which I find wholly omitted, or not sufficiently explained by others.

COMMENTARY II.

Of Bleeding, especially of opening the jugular Veins.

LET our first Discourse therefore be on the taking away of Blood. *Hippocrates* informs us that four of the diseased were healed by a spontaneous eruption of Blood: Whose Cases are indeed so drawn up, that if the like kind of Disease should at any time happen, we may thence receive the clearest Indications for bleeding. In the first we have these things remarked; ^a *a violent Fever, Heaviness and Pain of the Loins, a Delirium.* In the second, ^b *a burning Fever, Restlessness, Redness, Deafness, Watchings and Delirium.* In the third, ^c *a Fever, Restlessness, Watchings, Convulsions, Pain, Coma, and Delirium.* In the fourth, ^d *a burning and acute Fever, Watchings,*

^a 1. 7.

^b 3. f. 2; *Ægr.* 7.

^c 3. f. 2. *Ægr.* 11.

^d 3. f. 2. *Ægr.* 12.

ings, Heaviness and Pain of the Head, Redness of Face, Delirium.

When these Signs thus make their appearance, there is no one, who is moderately versed in Physick, but sees that Blood must immediately be taken away, if so be the *Strength* of the Patient permits it. For the only thing to be regarded, if any Blood is to be taken away in these Disorders, is what degree of Strength there is: Of which, tho' there be various Marks, yet, whether it is sufficient, is most certainly known from the Pulse. So true is the remark of *Celsus*^a, that the force of the Heart is better known by the Veins, than by any outward appearance.

The Signs taken from the Pulses are wholly omitted by *Hippocrates*, altho' he is the first who has given us the Name of the Pulse in Writing, either because he was unacquainted with them, or because he judged them to be of no great Use: Which Science, *Galen*^b informs us, and almost that only, he himself at last added to the Medicine of *Hippocrates*. And undoubtedly in the letting of Blood^c, great weight is to be laid on this Distinction of the Pulses. Therefore, in this sort of Fevers, whoever perceives a strong and full Pulse, may open a Vein without any manner of delay. I confess there is very often need of a nice Judgment, when to bleed in acute Fevers, and when not; for in this Case much Caution is required; this seems to be a constant Indica-

tion

^a 2, 10.

^b Gal. de Cris. 4.

^c *Præcog.* 13.

tion for Bleeding, if to the other Signs, which have been now described, a strong Pulse should be added. And in *acute* Cases indeed it is much better to bleed about the beginning, while the Strength is yet entire; for otherwise, when the Disease is in the decline it often signifies nothing, or becoming inveterate it hastens on Death.

As for the more general Precepts relating to bleeding let them be learnt from others: it will be enough for me to point at the Fountain. I should chuse to inquire whether the *Cases* of *Hippocrates* suggest any peculiar manner of letting Blood. It is certain that the Head and Brain of four of these Patients were so affected that they all fell into a *Delirium*; and by the Blood's being at last discharged by the *Veins* of the *Nostrils*, they were cured of their Disorder. And indeed an Eruption of Blood from this Part, as it is the most natural, so is it also sometimes the most immediate means of preserving life. Since therefore it is the duty of Art to follow the guidance of Nature, it is certainly allowable in such streights to open the same Veins or at least those which are derived from the same Channel. But which of them lie so much exposed to the Launcet, as the *Jugulars* themselves, from whence all the others which are scattered thro' the Head arise? therefore I cannot but take notice, that hardly one of those Persons, whom *Hippocrates* says were seized with these Fevers, were free from a *Delirium*: in which disorder of the Brain, as often

ten as it should be joined to a Fever, because I imagine some singular relief might be had from opening the *Jugulars*, give me leave to discourse something largely upon the manner of opening them, and borrow a few things from Anatomy, whereby what I have to say may be set in a clear light.

The *Jugular Vein* is either *External* or *Internal*: of which this is much the larger, as *Fallopious*^a has most accurately described it after *Nicolaus Massa*^b, though the quite contrary is observed in *Brutes*, from which the figures of these Veins are described in *Vesalius*^c. The extreme Branches of the *External* take their rise from the Mouth, Fauces, Face, Tunics of the Eyes, and lastly, from the whole Skin and Muscles of the Head. The *Internal* which lies much deeper, although it may sometimes, according to *Fallopious*, bestow some Branches upon the Parts just mentioned, rises directly to the bottom of the *Cranium*, and is immersed into the lateral Sinus's of the *dura mater*. So that the extreme Branches of the external *Jugular* are inserted into the Branches of the external *carotid Artery*: in like manner the internal *Jugular* and internal *Carotid*, are conjoined and flow together by the intervention of the Vessels of the *dura mater*. By which contrivance in the Fabrick the Blood flows up and down thro' the Brain and Head. We shall easily understand this Structure and distribution of the Veins, if we would give ourselves the

^a *Observat. Anatom.*

^b *Intord. Anat.* 62.

^c *Lib.* 3. 7.

the trouble of examining a little narrowly into it, and lastly, upon this Foundation, let the opening of the *Jugulars*, in Diseases of the Head and Brain, be supported.

The Custom of letting Blood out of this place is pretty antient, however it obtained but among a few: of which if we should give a short account, it will both give us some light into this Argument, and perhaps prove entertaining to the Reader. There are some, who tell us that *Galen* opened the *Jugulars*; though, if I am not mistaken, he does not seem to order the opening of them, but to prescribe a Method of Cure, if by any chance they should be cut^a. In an *Anatomy of living Animals*^b, the *Jugulars* are ordered to be opened, in the beginning of a *Leprosy*, and *Quincy*, and *streightness of Breath*, in a *severe Asthma*, in an *hoarseness of Voice*, in an *abscess of the Lungs*, in a *difficulty of breathing*, and in *diseases of the Spleen and Sides*. But with great injustice is that Book ascribed to *Galen*, which is indeed very ridiculous, and drawn up as it seems by some *Arabian*. Much the same things are mentioned in the *Introduction* of *Soranus the Ephesian*: but, since this likewise is plainly a fictitious Piece, and since *Celius Aurelianus*, who professes himself in almost every thing to have followed *Soramus*, is altogether silent upon this Head, we can gather nothing from hence, to prove the antiquity of this kind of Medicine. It will be therefore sufficient to

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deduce

^a *Method. Med.* 31. *Art. & Ven. dissect.* c. 7.

^b 25.

deduce the original of opening these Veins from the time of *Alexander Trallianus*, who tells us, that he himself opened the *Jugulars* ^a, and that it was of very great Service. *Actuarius* ^b mentions this Method of Cure as a thing familiar with some in his time, and which he therefore recommends in a *Catoche* and *Phrensy*. The *Arabians* prescribe it in all Diseases of the Head, and not in them only, but in a Leprosy and acute disorders of the *Thorax*: whence possibly this Custom might pass to the *Ægyptains*, which *Alpinus* ^c affirms to have flourished amongst them at that very time, when he was at *Alexandria*. After the times of the *Arabians* we find hardly any mention of this kind of bleeding, except in *Bertrucius* ^d and *Arnoldus Villanovanus* ^e, (who transcribe it *verbatim* from them, as the *Arabians* generally did from the *Greeks* :) till about the Year 1500. when *Jacobus Carpensius* revived the study of Anatomy which was then almost extinct, and described at large the manner of opening the *Jugulars* ^f. In which Age indeed this kind of Cure is highly extolled by many, though it was far from coming into a Custom. For *Botallus*, who wrote about the Year 1570, expressly tells us that he never saw it prescribed by any Physician, or attempted by any Surgeon; and that therefore it had never been in practice, or else was grown quite out of use: and though he himself first introduced the practice of bleeding into *France*, and opened

^a Lib. 4.
de Phrenis.

^b Lib. 3. c. 1.

^c Medic. Ægypt.

^d Cap. 4.

^e Reg. San. cap. 37.

^f Ijag. Anat.

opened any Vein in almost every Distemper whatever, confesses that he never dared try it in the *Jugulars* ^a, *fearing lest upon account of its largeness, and its nearness to the great Trunk, the Blood should not be either soon enough, or safely enough stopped.* Likewise *Riolanus* the Father, who lived not long after *Botallus*'s time, speaking of the Apoplexy, breaks out into these Words, *some Persons have ventured to open the Jugulars as the last remedy.* In like manner *Fabricius Hildanus*, who says, that he has often made use of this Remedy in Ophthalmies, Hemicrania's, and Inflammations of the Brain with the greatest success: in the Epistle which he wrote to *Doringius* ^b in 1614. writes however that he had hitherto known very few Physicians who approved of the opening these Veins, and *acknowledges it to be dangerous, unless the Surgeon be a Man of Experience* ^c. Moreover *Julius Guastavinus*, a Professor at *Pisa*, in his Writings published the same Year, affirms that these Veins cannot be opened without danger. Thus it is manifest that most Persons were deterred from this kind of relief, either because they had observed that Wounds of the Jugulars were sometimes fatal, and they had unjustly persuaded themselves that the same would ensue upon their being cut; or rather because, as it often happens, it had not happily succeeded, being performed by an unskilful Hand, and had fixed a note of Infamy upon the Experiment. By this means it frequently happens,

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^a *Currat. per. V. S. cap. 40.* ^b *Cent. 4. 14.* ^c *Combust. cap. 13.*

happens, that whatever Remedy shall be branded with Ignominy, thro' the ignorance of one Person, shall be hardly able to recover its Reputation, notwithstanding it should be universally approved of by the Learned.

But however this matter may stand, there is no instance in the History of Physick, where any ill consequence has attended this Operation when it was rightly performed: nay, it has been very often found from Experience, that there is no better way of relieving many Distempers, those especially that affect the Head. In a *Phrensy* indeed, which follows upon a Fever, I have experienced this Remedy to be greatly efficacious, when other Remedies did not so well succeed: and not only efficacious, but also so very safe, that I much wonder there is any thing to be met with in Authors about the difficulty, much less the danger of performing it. For this Vein, as it is opened without any trouble so when it is cut it is healed with the most ease of any. I shall not therefore, I hope, do amiss, in endeavouring fully to investigate what influence the opening of the Jugulars may have upon Diseases, whereby the Reasons and Times of opening them may be more certainly known.

The *Jugular* is therefore opened for the sake of either making a *Derivation* or *Revulsion*; that the Blood flows in a greater Quantity into the Parts affected, is occasioned by *Derivation*, and with a less, by *Revulsion*. Which words, although they are antient enough, yet

no one will be able to understand them, nor consequently to determine justly the laws of opening them in either kind, unless the Structure of the Vessels and the Motion of the Blood be accurately known. And that this is very true will be easily acknowledged, by every one who has read over any one Writer before *Harvey*. Whoever doubts this, let him turn over, instead of many, that one Book writ by *Renatus Morellus* concerning bleeding in a *Pleurisy*, wherein he has collected the several Opinions of all Authors upon this Doctrine of *Derivation* and *Revulsion*.

Therefore in Diseases, which affect those Parts, from whence the Branches of the external *Jugular* arise, *e. g.* in a *Quincy*, *Ophthalmy*, and Tumors of the Face; when we cut the Trunk of this Vein, it is plain we do it to cause a *Derivation*, if we would be supposed to mean any thing by this Word, distinct from *Revulsion*. For this Passage being opened, and the resistance remov'd, which the Blood pent up in the extreme Veins sustained from that, which is contained in the Trunk of the *Jugulars*; the Blood flows with greater liberty from the *carotid Artery*, which we have said to be joined with the extremities of this Vein, and circulates swifter through the Part affected: so that there is a larger quantity of Blood derived into it, at the very time of making the Incision, than when the Vein was not yet opened. Therefore by opening the *Jugulars* in such a Case as this, the Blood acquires

that force by its celerity as to be able to propel and carry off any matter remaining in the smallest Branches, and obstructing the *Arteriola*: almost after the same manner, as the opening of the *Saphæna* brings down the Menfes.

From which we may learn, that the effect of *Derivation* is very sudden and expeditious: in which state it will be necessary to observe, if at any time this Advice should succeed well, that it will be effectual in a recent obstruction: otherwise, if it be confirmed and inveterate, the Blood coming on with a greater Impulse presses the Vessels more strongly, and causes the Humours which adhere stiffly to them entirely to block up the way. The same frequently happens upon opening the *Saphæna*, which being sometimes done inconsiderately, occasions an obstinate Suppression of the Menfes: after the same manner as *discutient* Plasters, which being seasonably applied wholly disperse the Tumor, but applied too late excite and raise it, and at last resolve it into Pus. Upon which account it is, that we may observe in a Quinsey; for example, bleeding either with a Launcet, or Cupping-glasses, or Leaches on the Tongue, Chin, Fauces and Neck, is ordered by *Cælius Aurelianus* at the very beginning of the Distemper, but absolutely forbid in the continuance of it: and the same Author, who, persuing the footsteps of his own Sect, *i. e.* the *Methodical*, opened a Vein but *once* in any Disease whatever, forbids it in this after the *fourth* Day; although he grants it may be done before
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the *third* Day, contrary to the rule prescribed by all those whom he follows in every kind of Distemper.

The later Physicians therefore, the better to remove these kind of Tumors which arise with an Inflammation, advise beginning with *revel-lents*; that the impulse and heat of the Humours being now abated, the obstruction being by these means weakned, may, at last, with a small trouble be entirely removed by Medicines causing a *Derivation*. By the same reason ought the intention of the Physician to be governed, and directed by the same rule, when the Humours are to be derived from the *Jugular*, from which, as from a Root, all those small Veins are propagated. Hence in that remarkable Case, which *Fabricius Hildanus* gives us of a violent Inflammation in the right Eye cured after this manner; on the first Day a Vein is said to be opened in the right Arm, on the next a *Purge* was given, and on the third the *Jugular* was at last opened. Upon the same foundation is that Custom supported, whereby when a *Quincy* encreases, after the use of *Re-vellents* we open the the *internal Jugular* with the utmost success about the corner of the lower Jaw: for whatever *Riolanus*^b may have objected from a Spirit of Contradiction, we have not long since demonstrated before the *Surgeons of London*, in the anatomick Theatre, that a Branch of this Vein is carried on to the maxillary Glands and the Fauces; which meets not

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only

^a Lib. 3. 3.

^b Animad. in C. Bauhin. Anatom.

only with the external *carotid Artery*, but also with the external *Jugular*: and therefore when it is opened, as we have mentioned in a violent *Quincy*, it has the same effect, as if it had been really a Branch of the *external Jugular*. What *Hippocrates* likewise says of opening the *mammary* ^a Veins in the same Disorder, is not altogether so ridiculous as *Calius Aurelianus* ^b imagines. For those also, as *Fallopius* ^c first inform'd us derive their Origin sometimes from the *Jugulars*.

For this letting of Blood, from the *external Jugular*, not only removes the Obstructions and Inflammations that arise without the *Cranium*, but greatly relieves those also which seize the *Brain* and its Membranes. And indeed is more safely made use of in these, as being not in the least liable to that Danger, which is sometimes to be feared from *Derivation*. For when the *Jugulars* are emptied in Diseases of the Brain, a *Revulsion* is made in the Part affected: Which I shall explain a little more distinctly, because I hear some things objected against it; as if the Brain could not be relieved by this Method of Evacuation, because the *external Jugular* carries nothing from it, neither has it any communication with the *internal Carotid*, which moistens the Brain. This indeed is a specious Argument: But I shall easily prove to any experienced *Anatomist*, that however true that Reason may be which is drawn from the Structure of the Vessels, yet what they gather from thence is so,

^a De Morb. 3. 11.

^b Lib. 3. 4.

^c Obs. Anat.

so very far from the Truth; that, for that very Reason, the contrary conclusion ought to be made.

That this may the more clearly appear, we must recollect from what has been said, that the *carotid* Artery is divided into two Branches, the external and internal, of which this is joined at the extremity with the internal *Jugular*, and that, in like manner, with the external. When therefore the Branches of the internal *Carotid* are seized with an Inflammation, the *Nisus* of the Blood, and the *elastick* Power of the Vessels, remain in a state of æquilibrium, as if they were tried with equal Weights; the one being diminished, the other encreases: But if by opening a Vein we draw off some part of that Blood which is wont to be carried into the Vessels of the Brain, that force, with which the Mass of Blood presses the Arteriolæ, will be diminished, and consequently the Heat, and that rarefaction which follows it, will decrease; so that the Coats of the Vessels, having as it were recovered their liberty, are able more strongly to contract themselves, and to force out whatever may remain in the very narrowest Passes.

We gain also by this means, that by an Evacuation being made from the *Jugulars* that Cohesion is weakned, whereby the Humours are compacted together; so that the Blood being rendred more fluid, is easier carried thro' the Vessels in its usual manner. In which two things indeed principally consists the Virtue of all *Revellents*. But,

But, that what has been said may have the greater force in this Argument, let us state the Case thus. The size of the external and internal *carotid* Arteries, if they be compared together, are pretty near equal; therefore an equal quantity of Blood is carried into either of them from the Trunk: Besides both the Trunks of the Carotid, as well right as left, if the matter be brought to a Calculation, will receive every Minute of an Hour six Ounces and an half of Blood, when for the most part sixty six Ounces flow into the Aorta. But the quantity of Blood, derived into any Vessel whatever, is determined after this manner. Namely such as answers to the *Momentum* of the Blood, if you exclude all Resistance. From whence, if the exterior *Jugular*, which is united to a Branch of the external *Carotid*, should be opened, the Resistance which is opposed to the Blood will be greater in the internal *Carotid*, than in the external; and the *elastick* force of the Coats would hinder the Blood's flowing freely into this Branch, which is therefore propelled into the other, namely, the *external*; so that by this means, when the Structure of the Blood is diminished at the Mouths of the internal *Carotid*, the motive Faculty of the Fibres exceeds the force of the Blood, by which only the Vessels are distended, and carries off the Obstruction by opening the narrower Passages and removing the Matter.

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The truth of this will more clearly appear, if we should reason a little more closely upon this matter. Let the *Momentum* of the Blood, therefore, if compared with the Resistance, be as five to one; which indeed, to speak sparingly, will be found the very least Proportion: In this Case if the Jugular be opened, the quantity of Blood, flowing in the internal Carotid, will bear the same proportion to that which is carried to the external, as four to five. Wherefore a Passage being opened, if, in the space of two Minutes, thirteen Ounces are derived from the external *Carotid* into the external Jugular, in the same space the internal *Carotid* will receive ten Ounces and an half. In so small a space of Time the difference will be two Ounces and an half. Hence it is very clear, that it is not only the most compendious and expeditious of all *Revulsions*, but also the very strongest of those which are made from the *Brain*. If therefore any other kind of Bleeding will bring any manner of Relief, this seems to promise more than the rest.

Of very little weight therefore is that Argument, with which some contend, that since the internal *Carotid* is not conjoin'd with the external *Jugular*, the Head cannot be in the least relieved by this kind of Bleeding: Which is quite foreign to the purpose; for if they had any communication, hardly any *Revulsion* at all would be made in this Case. For let us grant that the internal *Jugular*, which is united with that Artery, may be opened: By that Calculation

Calculation, which we just now made use of, it plainly appears, that more Blood (namely, two Ounces and an half) will flow into the internal *Carotid*, than which forced it self in before the Vein was cut: Whence that force, with which the Blood compresses the Vessels of the Brain, will reach to five Ounces, if the internal *Jugular* is opened instead of the external.

It seems unnecessary to say any thing more in order to shew what Efficacy there is in this kind of Remedy, as often as any thing is to be drawn off the *Brain*. It is sufficiently proved from Reason and Experience. For what happens in every Dog which is hang'd, sufficiently proves to any one, who has any Knowledge in Anatomy, what Relief a liberal Discharge of Blood from the external *Jugular*, must afford in these Disorders of the Brain: Inasmuch as the closing up of this Vein overwhelms the Vessels in the Dog's Brain with Blood, and brings on Death after the manner of an Apoplexy. So easily may the Method of Healing, as it was first taken from these Experiments, be also carried to a much greater length. I will only add, that from hence a very remarkable Instance may be drawn, how greatly the Healing Art might be improved from the Doctrine of the *Circulation of the Blood*, if we would apply that Light to Practice, which we receive from this immortal Invention. For among those, who lived or wrote before it, there could be no certain and true Knowledge of

of this kind of Medicine. For they were entirely unacquainted with the Reason, why, in some Disorders of the *Head*, the opening of the Jugulars should make a *Derivation* of the Humours, and in others a *Revulsion*: Which unless it be exactly known, it can hardly be, that Blood should be taken away in either of them, either safely or seasonably. Therefore *Marcus Gatinaria*, who was extremely averse to this Method of Bleeding, and who wrote about the Year 1440, and whom *Jacobus Sylvius* transcribed about an hundred Years after, forbids it indeed in every Distemper, especially in an *Apoplexy*^a; being induced chiefly by this Reason, that it carried a larger quantity of Blood into the Brain. And *Holler*, who orders the *Jugular* to be opened in the same Distemper, fell into that erroneous Opinion, as to say it was done for the sake of causing a *Derivation*. In like manner *Horatius Augennius*, who has explained the several ways of Bleeding in a very large Volume, roundly affirms it impossible, to make a *Revulsion* and *Derivation* of the Humours by the same Vein.

Thus widely indeed does the Knowledge of Anatomy extend itself to the whole compass of Physick; without which it is either nothing at all, or *Empirical*. For the Opinion of the Practitioner perpetually fluctuates, unless he perfectly understands the principles of his Art: and if by chance any such one should succeed happily, he would merit no other Commendation, than that

^a *Method. Practic. Apoplex.*

that he placed his whole Confidence upon Fortune.

Give me leave to illustrate what has been said about opening the *Jugulars* by an Example; which I have therefore chose to select out of many, because, the Experiment being a second time repeated, the Disease was at last carried off in a very singular manner. Therefore, that I may follow *Hippocrates's* Example, I shall describe the Form of the Disease in a few Words.

In the Year 1705, in that Expedition which was made to *Spain*, both the Fleet and *British* Camp were seized with a Fever, it was of the continual kind, tho' it usually remitted in the Day time, and seemed to approach nearly to the *Stationary* one which *Sydenham* has described in the Years 1685 and 1686; unless in that the Cold succeeded the Heat by turns, this abated only in the Remission of the Heat. It raged chiefly at the beginning of *July*; whether that very hot Season, which had just preceded, was the Cause of it or not I cannot tell. The access of the Disease was sudden and violent: For besides the ordinary Symptoms, as Thirst, Restlessness, Heaviness of the Eyes and *Præcordia*, Roughness of the Tongue, Pain of the Joints, Weakness of the Body, Costiveness; the *Brain* also gave some Tokens of the approaching Evil, neither have I known any one labouring under this Fever, that was free either from a Pain of the Head, or a Vertigo. In very many the Stomach was disorder'd. Some were troubled
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with a Pain in the Loins, as if the Small-Pox were coming out. Sometimes the Fever came on with a slight Shivering. When it was arrived to its State, it usually brought on a difficulty of Breathing, a subsultus Tendinum, and Deliria, unless seasonably prevented by Art. In the Encrease of the Distemper frequent Hiccoughs, which sometimes lasted two Days without any Danger to the Patient. Persons of a robust Habit were affected more than others, and more severely, and carried off sooner: The others were generally taken away by a lingering Death. Some, when the Fever seemed to have been wholly gone off, lay four or five Days, without Pain or Sickness, tho' Weak; afterwards being seized suddenly with Convulsions of the Nerves, they in a short time expired. And this indeed generally happened, when *Vesicatories* were neglected. As they grew well they were sometimes troubled with a Diarrhæa, which yet hardly ever brought on Death, unless attended with Gripings. Others recovered their Strength but very slowly, particularly those who were Phlegmatick; who were also longer Afflicted with the Distemper. In some few the *Carotids* or Abscesses, formed about the Groin, carried off the Disease; which indeed, as far as I could observe, was the only Remedy which Nature administered in this Distemper: But neither was this wont to happen, unless *Evacuations* had been but sparingly made Use of.

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With this kind of Fever was Mr. *Pool* seized, a Lieutenant on Board the *Barfleur*, whom Mr. *Cooper* the Surgeon attended as an Apothecary.

First Day, He complained of a Pain in his Limbs, Heat, and Heaviness in his Head. His Pulse quick and strong; no Stools. Therefore twelve Ounces of Blood was ordered to be taken out of his Arm.

2. The Pains something abated, the rest much the same. A Nausea was also added. Wherefore in the Evening he took a *Vomit*, by which he not only had a Stool, but his Head was also relieved, and his Heat abated.

3. The Night restless. His Stomach was better. Towards Night he grew violently Hot. His Pulse quick and unequal. A very great redness in his Face, and Pain in his Head. Intense Thirst. A *Vesicatory* was applied to the Neck. He made use of temperate Medicines, and abstain'd wholly from the hotter sort.

4. In the Morning his Pulse much quieter. But after Noon every thing grew bad again. The Pain in his Head returned, and he was also sometimes delirious. His Urine very Pale, neither was there any Sediment in it. Large *Blisters* were applied to each Arm.

5. In the Night he tossed about much. In the Morning things much the same. His Pulse strong, quick, and hard. Therefore since the *Vesicatories* were of no Service, he was blooded in the Jugular: Whereby his Head was
greatly

greatly relieved, and his Senses restored. His Heat much abated, his Drought however continuing. Thus he continued about sixteen Hours.

6. After Midnight he was again Delirous, and talked wildly. The Fever was very violent, without any remission. A *Clyster* was injected, and a *Vesicatory* applied to the Head after it had been shaved.

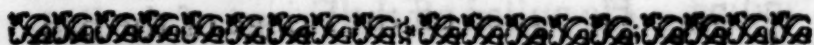
7. Every thing the same. No intermission of his Delirium, besides a *subfultus Tendinum* in the Hands. His Breathing somewhat difficult. Another *Clyster* was applied.

8. The Heat grew very vehement. Also a greater *subfultus Tendinum*. His Tongue was sometimes fixed. His Eyes sparkled. The Urine not discoloured, yet no Sediment. *Vesicatories* were applied to both Thighs.

9. He was wholly deprived of his Understanding. He pulled off the Fringe of the Bed, and plucked the Flocks, when he had before faltered in his Speech. He was sometimes seized with an Hiccough.

10. Because every thing seemed to run on for the worst, altho' *Vesicatories* had been so often applied, and because his Pulse was still pretty strong, twelve Ounces of Blood were again taken out of the *Jugular*. From which time his Delirium almost wholly went off on a sudden, and the other Signs were gradually changed for the better, so that at last he perfectly recovered.

These things, which have been said concerning the *Jugular Veins*, regard as much the opening of the *temporal Artery*, or rather more. For by opening it, because of that impulse with which the Blood is thrown forth, if it runs with a full Stream, the most expeditious Revulsion is made that can be. The *Arteries* were frequently opened by the antient Physicians; and *Alpinus*^a informs us, that the Custom had so far prevailed among the *Egyptians*, that they opened these as often as the Veins. But this manner of Bleeding, that it may succeed happily, is attended with some difficulty, and even sometimes with danger: Wherefore I am unwilling to dwell longer upon this Subject, especially since it seems very unlikely that our Countrymen will ever be reconciled to this kind of Practice.



COMMENTARY III.

Of Sweats.

HIPPOCRATES mentions some who were first thrown into a Sweat, and then delivered from their Fever, whether that Sweat really terminated the Disease, or rather arose about the End of the Distemper, as it plainly happened in B. 1, 6, 7. B. 2. Sect. 2, 7, 11, 12. In which Cases indeed the Fever seems

^a *Medic. Egypt. p. 60.*

seems to have been carried off rather by the eruption of Blood, than the force of the *Sweat*. For, as far as I can perceive, *Hippocrates* always mentions the Sweat as a Prognostick only, and not as a means of Cure. Therefore in those Books, which are accounted genuine, he never mentions any Remedy, which might provoke Sweat: Even in those Books, which are falsely ascribed to *Hippocrates*, mention is but *once* made of this Sweat which is occasioned by Medicine. The Author of the *second Book of Epidemics* ^a orders it: But by what sort of Medicine does he at last raise a Sweat? He prudently covers the Patient with the *Bed-Cloaths*, and then gives him *boiled Meal* and *racy Wine*. Neither does he advise these things to be given, but in those Fevers which arise from a *Lassitude*, or some such like Cause; of which sort are those generally which are called *Diary*.

So little in use, among the Antients, was any internal Medicine to provoke Sweat, that even in the *Latin Hippocrates* there is not one Word of it to be found. If therefore in these Fevers sweating afforded any kind of Relief, it seems all to have proceeded from Nature. In which perhaps the remaining Matter might more easily be carried off thro' the Skin, either because of the temperature of the Air, or because of the Patients regular way of Living, who were not corrupted either by Luxury or Sloth. Truly, as Men live now a-days, we

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have

^a *Sub Fine.*

have but little expectation of the Distemper's being carried off this way, either by Art or Nature: And if the Fever should at any time happen to be very violent, I believe I may truly affirm, that it is hardly ever cured by Sweating alone.

However, from the times of the *Arabians*, there has sprung up an immense variety of sudorifick Medicines; that there is hardly any Fever, against which either some Chymist or knowing Woman have not found out a *Specifick*, without any regard had to the Disease. Hence that Custom has come down to us, that the Persons labouring under a Fever should be greatly supplied with *Cardiacks*, as promising a pleasant Method of Cure. So easily are we led into an Error for the sake of Pleasure; which is never more dangerous, than when our Health is concerned.

This Method of Cure, as being founded too much upon the hotter Medicines, is justly rejected by *Sydenham*. Which however does not seem to be wholly thrown out of our Modern Practice, as it ought to be. For what do the Physicians obtain by this Method of Cure, except that by throwing in all the hottest things, and provoking Sweat abundantly, the Circulation of the Blood becomes more rapid, which is confessed even by themselves: Whereby, we observe Deliria and Convulsions, as the Fever gradually encreases, and at length affects the Brain, if not brought on, at least not prevented. And this is constantly experienced

rienced by those, who in acute Fevers are fond of giving nothing but *Rad. Serpentar. Sal. C. C.* and the like. The same usually happens, when, in *remittent Fevers*, the *Cortex Peru* has been unseasonably applied: from which the Physicians generally find this Effect; that the Fever which was before something abated, now, without any delay, rages a-new. But in this state of Affairs, what measures do they at last take? Being terrified with Fear, and at the greatest uncertainty, they are obliged to turn themselves this way and that, and fly immediately either to *Vomits*, or *Bleeding*, or *Blisters*, as to the last Remedies. This Effect therefore hath this preposterous Method of Cure, that when the Distemper is now at a stand they leave off where they ought to have begun; and often attempt those means of Cure, at an improper time, unsuccessfully, which the skillful Practitioners prescribe in the beginning, to the no small Relief of the Diseased.

There is another madness also different from this, which some are possessed with, who rely wholly upon *Acids* for a Cure; and place all their hopes upon *Vinegar* and the *Juice of wild Apples*: as if, because it is unreasonable to burn up the Patient, they should therefore quite kill him with Cold.

I would not have what has hitherto been said, to be so understood, as if I would advise no Remedies in the curing of Fevers, which might provoke Sweat. For I do not deny that

those which are temperate, may and ought to be given with much success. Those which we have before spoke of, since on either hand they are in too great an extreme, ought wholly to be discarded the Physician's *Materia Medica*, as plainly pernicious: with small safety also may we trust to those which are milder, if we rely altogether upon them. But if *Evacuations* have preceded, they will both bring greater Relief to the Fever, and more expeditiously throw forth the Sweat. Which is also very true of *Opiates*: than which no Medicine is more efficacious in opening the Pores of the Skin.



COMMENTARY IV, Of Vomiting.

THERE is but one Case in *Hippocrates* B. 1. 13. in which, where a *Vomiting* preceded, the Disease is said to be carried off. Which observation has been brought into common Practice by the most celebrated Masters of our Art. For neither is there any Remedy equally salutary at the beginning of Fevers; oftentimes it is even necessary, if at any time, which frequently happens, there is either any Nausea, or weight in the Stomach, or also Pain in the Head. This kind of Medicine was not uncommon even among the most ancient

tient *Greeks*, and in *Celsus's* Time very familiar at *Rome*. For by this Method of Evacuating not only the first Passages are purged, and a redundancy of crude Matter cut off; but, since the Bowels and Muscles of the Body are agitated with a very violent Motion, and the very Particles of the Medicine insinuate themselves into the Blood, the Humours are at last so resolved, that there is a freer circulation thro' the small Vessels, and if any thing is superfluous it may pass off thro' the cuticular Outlets. In this Case therefore, after the Vomiting was excited, *Hippocrates* tells us, that a great Sweat ensued.

Thus a Medicine, which provokes a Vomiting, has some internal Action: Which appears in nothing plainer than in that celebrated Root, the *Ipecacuanha*. The force of this in attenuating the Humours is very remarkable; which is confirmed also by the very great bitterness of the Root itself, and that brisk Salt which is *chymically* extracted from it. I have indeed known this Root to have been given in a large Dose, when hardly any purging has followed either by the Mouth, or by Stool: But after an Hour or two the Patient began to grow Hot, so that, the Pulse being raised, he at last fell into a very profuse Sweat. And in this, as far as I can conjecture, chiefly consists that remarkable Efficacy in *Dysenterick* Disorders, which the *Ipecacuanha* challenges to itself; in comparison of all other Emeticks. Therefore by the *Brasili-
lians*

lians ^a it is esteemed the most present Remedy against Poisons.

I have said that *Vomiting* should be attempted chiefly at the *beginning* of Fevers. Neither is *Hippocrates* to be produced as a Witness on the opposite side, altho' he has said that the Disease was carried off by this Evacuation about the *fourteenth Day*. For this Woman was plainly delivered from her Fever on the *seventh Day*, and had continued well for three Days: But on the *eleventh* she was seized with a Shivering, which was followed by an intense Heat: So that this Fever seems to have been of the *intermittent* Kind; which, as it often happens, had succeeded a *continual* one. And therefore *Vomiting* put a stop to this new Distemper at the beginning: Which is always applied with success towards removing intermittent Fevers, and is also effectual against continual ones, if the Disease is not yet become inveterate.

And this indeed ought to be done in acute Fevers; however it is not therefore convenient to try it in all Diseases, which have a Fever joined to them. For what must we think of those, who in a Pleurisie, for example, prescribe *Vomits*, and those very strong, contrary to the advice of *Celsus* ^b; as if that vehement straining of the Side, which is occasioned by the Vomiting, would ever abate the Disease? Yea, it must necessarily encrease it. For by the unseasonable application of that kind of Remedy,

^a *Gul. Pison. Histor. Brasil.*

^b 3. 6.

Remedy, that Matter which was fallen upon the *Pleura* or the Lungs, is struck in much the deeper and more firmly obstructs the Vessels. And what of those also, who order Emeticks when the *Small-Pox* are almost just at the Height? Since no Medicines more powerfully strike in the Humours, than those which excite Vomiting, whose power in Revelling is very manifest, from hence, that they very often remove *Sciatica's* and *Oedematous Swellings*, when other Revellents have been long tried in vain. Upon this account therefore, the most excellent practical Writers, plainly forbid *Emeticks*, when the *Crisis* is just at hand, inasmuch as these, since they are endued with a Power of repelling, may without doubt disturb that Method of Relief which Nature, the best guide in Practice, attempts: Besides, the most experienced Practitioners in *Surgery*, lay this down as an established Rule; that whenever any Tumor is inclining to Suppuration, that then they must abstain not only from *Vomits*, but from all *Evacuants* of any kind whatever. Wherefore *Vomiting* when the *Small-Pox* is just at the Height, unless there be any danger of a Suffocation, is condemned both by Reason itself, and the universal Consent of Men of Experience: Of which we have however found some Persons to be so very fond, that they very familiarly use this Remedy even at the very point of Death.

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COMMENTARY V.

Of a purulent Spitting: Of a Pleurisy likewise, and Peripneumony.

PRTHION spit much, B. 3. 1. in whom however the Disease was so far from being carried off by the discharge of any Matter, that it went off not without a Suppuration arising at last about his Seat. *Anaxion* is the only one, B. 3. Sect. 2, 8. who happened to be freed from his Distemper this way. The Case is indeed remarkable, which *Galen* also very often treats of, and shews with what Judgment it was managed by *Hippocrates*; and tells us also that here were various Symptoms joined together, which are not perpetual, and upon that account the Name of the Disease was omitted by the Author: Which yet *Galen* himself acknowledges to be a genuine *Pleurisie*. Of which I will say something more distinctly, because I find this Argument not sufficiently treated of by Authors.

A true *Pleurisie* therefore arises from an Inflammation of the *Pleura*: Inasmuch as there are dispersed within the sides of this Membrane (for it is double) many *Arteriola*, derived from the intercostal Branch, which being oftentimes too much distended upon a slight occasion, are wont to be obstructed, and produce an Inflammation. The genuine Signs of a *Pleurisie*, which distinguish it from any other Disease

Disease whatever, are four, *a violent and pungent Pain of the Side, difficulty of Breathing, Fever, and hardness of the Pulse*; which last I should rather place among the essential Symptoms, than a *Cough*, with *Galen*. Whose Opinion, indeed, oftentimes industriously to despise and reject, as it would be a Mark of great Arrogance, so to be willing to follow him in every thing, of much superstition. For in the Practice of Physick we are not to regard Authors so much as the Force of Reason.

The Editor of *Riverius Reformatus*, following *Joh. Manelfus*, (who, in opposition to the whole Body of Physicians, allows a *serrated Pulse* only in *Hecticks*^a, not in *Pleurisies*) entirely explodes this Hardness of the Pulse, as a thing never observed in a *Pleurisy*, no nor in any other kind of Disease whatever. But, besides the universal consent of Physicians, that an Hardness of the Pulse is very familiar to the Pain of the Side, experience itself sufficiently proves, that it is always present, when not only this Membrane, but the others also, those of the Brain especially, are seized with an Inflammation something violently. And certainly if we appeal to Sense, the distinction of this Pulse is as plain and easy, as that of a strong, or quick, or full one.

But if we would take pains to enquire something narrowly into the Nature of the membranaceous Parts, the Reason of this Hardness will immediately appear. For all Membranes

are

^a *Bald. Bald. Epist. pag. 22.*

are *Elastick*, and are therefore differently, either constringed, or extended, by any external Force. Hence the Skins of Animals, as well dead or living, are strongly contracted, upon the application of any manner of Heat: and it is constantly so in all Bodies, which may be bent and recoil, that, if any part of them be more extended or contracted, all the other Parts likewise swerve from their former Position. For a Thread of Silk or Steel, a Cord, or musical String, if it suffers any force at one end, will vibrate at the other: all which we find to be either stretched or slackned equally through the whole length. In like manner if any Part of a Membrane happeneth to be violently twitched and contracted, the remainder consents with it, and is affected entirely after the same manner. But there is a mutual Communication between the Membranes of the whole Body, and from them all the Coats of the *Arteries* are propagated. An Inflammation therefore arising, the *Pleura* is greatly irritated and constringed, and communicates the same Species of Stiffness to the *Arteries*: and this contraction of the *Arteries*, by which they become less flexible, and yield to the Finger more slowly, occasions a sense of *hardness*.

As there can be no genuine *Pleurisy* without these signs, which I have just now related; so many others are often conjoined to those Disorders which we call *Pleuritick*: which yet belong to another Disease, and that in many respects unlike to this, namely, a *Peripneumony*.

In

Indeed any one may with reason wonder that the Description of these Distempers hath been so confusedly and implicitly delivered both by the Antients and the Moderns. The Antients affirm, indeed, that they may be distinguished from one another, but assign the same Signs to them both: and we may very easily observe, that what we read in them concerning the Mark of a *Pleurisy*, may be referred, indeed, to a *Pleurisy*, but conjoined with a *Peripneumony*. For a simple *Peripneumony* occurs in their Writings; but we never find any thing concerning a *Pleurisy*, which was not attended with a *Peripneumony*, except once in *Hippocrates* ^a. Most of the *Moderns* make hardly any difference between these Distempers, supposing them only dissimilar in degree: some also attend so little to the *Pleura*, as to allow it no share in a *Pleurisy*. From hence, therefore, hath all this difficulty arisen; namely, when the *Pleura* is so affected as to form an *Abscess*, the Lungs, as being next in Place, so also, if you regard their Fabrick extremely tender, easily catch the Infection, and adhere to the *Pleura*: so when a *Peripneumony* comes upon a *Pleurisy*, the Disease is however described, as if it was a mere *Pleurisy*. And this is plain from those who describe the course of this Distemper in their Writings. It must be confessed, indeed, it often happens, that the Lungs labour at the same time: but it is far from being always so in a *Pleurisy*. That this may be the bet-

^a *Morb. Lib. 1.*

better understood, it will not be improper to consider the situation and nature of those Parts, which are usually affected in these Diseases: for *Anatomy* will give us such a light into this affair, that in either Distemper we may both more clearly investigate the causes of the Symptoms, and also the Method of Cure.

A *Peripneumony*, therefore, is universally agreed to be nothing else than an Inflammation of the Lungs. It will be worth while to examine this, when disjoined and free from a *Pleurisy*, that we may see what Marks it voluntarily offers of itself. The Lungs being obstructed and seized with an Inflammation, the Vessels of the *Bronchia* must necessarily sustain the first shock of the Disease; which swelling above measure, the inner Coat of the *Aspera Arteria* is so compressed and vellicated, that the Muscles being thereby contracted, and the Breath rejected by the Mouth, it provokes a *Cough*. The Lungs being oppressed by this weight, there arises a certain sense of heaviness and uneasiness, and the Air being both sooner admitted, and expelled, the Respiration becomes more hurried and disturbed: so that the Heat, which is produced by the Inflammation is preternaturally intense; the Breath also, when it is emitted seems to grow Hot. And, indeed, this Heat in the Breath, is laid down by *Hippocrates* as a constant and perpetual sign of a *Peripneumony*: nay, it is the only one which is not also common to the *Pleurisy*; as we have this Distemper described both by him and all the Antients.

tients. When therefore the obstruction has prevailed for a long time, what is easier, than that some of those Vessels, which we have said to be agitated and beat against one another, should be broke? Whose Coats being divided, there will be discharged at a proper time, either a thin Humour, or a Sanies, or Pus, according to the Nature of the Ulcers. After this manner the Matter collected within the Membranes of the Bronchia is at length thrown off by Spitting, as Nature shews the way. When these, therefore, meet with an *acute Fever*, viz. a Cough, Weight in the Lungs, a very hot Breath, and a discharge of Pus, they are the peculiar and most infallible Marks of a *Peripneumony*. The last of which not only indicates the Distemper, but also generally carries it off; for few of those who labour under a *Peripneumony* escape, unless there arises a Discharge from the Lungs.

Nevertheless a *Cough* and *Discharge by Spitting* are reckoned by the Writers of all Ages among the Signs, by which a *Pleurisy* is distinguished. It sometimes, indeed, happens, that a *Cough* accompanies a *Pleurisy*, when it is nevertheless not at all naturally related to it: for the Lungs have been often found to adhere both to the *Pleura* and the Ribs, when at the same time there has not been the least *Cough*: in an *Empyema* likewise, in which the Matter floating every where about, continually presses the Superficies of the Lungs, a *Cough* is often wanting. That this however cannot be separated from a *Peripneumony*, we may be fully in-

instructed from *Anatomy*: and whoever is but moderately acquainted with the Structure of these Parts, must necessarily see how little an Inflammation of the Side only can avail towards Purging the Chest, unless there be at the same time also the same Fault in the Lungs, or what amounts to the same thing, unless there be a *Peripneumony*. So that *Riolanus* ^a rightly called those Persons who laboured under this Distemper *Pleuripneumonicks*. This indeed is confirmed both by Reason, and the History of Physick: for the Bodies of many *Pleuritick* Persons have been opened, in which the *Pleura* was indeed corrupted, yet the Lungs ^b have been found entire: in like manner, when we are told that the Patient died of a Pleurisy, we never find that the Lungs were untouched, if at any time both a *Cough* and *Spitting* preceded ^c. It were to be wished therefore, that as the custom of inspecting accurately into sound Bodies, so that also of morbid ones prevailed among us: for it is not in the least doubted, but that Light, by which a Physician may both investigate the peculiar Seat of very many Distempers, and also distinguish the genuine Signs, is to be borrowed from *Anatomy*. Upon which account I believe, *Celsus* ^d inserted that elegant Description of the human Body among his Precepts of Cure: and that *Aretæus* following his Example, premised a short Commentary on the

^a *Anthropolog. de Pulmone.* ^b *Bonet. Sepulchret. Vestig.*
^c *Obs. 36. Bald. Bald. 45, 56. Prosp. Mart. in Hippocr. 70.*
^d *Harder. Obs. Anat. Bonet. Sepulch.* ^d

the Structure of the Parts before his History of Diseases.

There is in *Dodonæus* a relation of an epidemick *Peripneumony*, which raged at that time, viz. in the Years 1557. and 1565. in which a *Cough* and *purulent Spitting* were constant attendants: and at last he thus concludes his Narration, *That this Disease was not a Pleurisy but a Peripneumony was demonstrable from the Dissection of the dead Bodies.* And by this he seems to insinuate, that the Physicians then judged it to be a *Pleurisy*.

Upon this consideration of the *Cough* and *Spitting*, as many others of the Antients, so *Herophilus* (than whom, if we credit *Galen*, no one was more versed in the knowledge of Anatomy and Physick) contends, that the *Pleurisy* is seated in the Lungs. The Argument, according to *Cælius Aurelianus*'s Interpretation, stands thus. *Dehinc etiam Tusculum signum est ex accedentibus consequens morbum fibrarum pulmonis, esudati corporis liquoris, sive Cannæ gutturis: singula etiam extussita de pulmone venire manifestum est, qui neq; venis neq; arteriis neq; fibris contiguus vel admixtus esse lateri videatur, ut per ipsum latere accepta excludi posse credamus.* And such truly is the force of this Argument, that whatever *Cælius* urges to the contrary, are plainly trifling and of no force. It must be confessed, indeed, that *Herophilus* was mistaken in the use of the Word

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Pleuritis

Pleuritis, who nevertheless judged very rightly of the Reason of the Coughing and Spitting: for he fell into this Opinion, that when the Disorder was in the whole substance of the Lungs, a *Perineumony*^a arose; when in part only a *Pleurisy*.

About two Centuries ago *Alexander Petronius* revived this Error, and imagined that all the Disorder was derived from the Lungs swelling and pressing upon the *Pleura*; he denied the possibility, indeed, of the Membranes being inflamed, and was therefore so far from allowing that any relief might be had from a loss of Blood, that he stiffly rejected it in the Cure of a *Pleurisy*. In which matter, the Authority, shall I say, or Confidence of the Man proceeded so far, that he founded a Sect at *Rome*: that by an unparallel'd instance of reviving an Opinion, not only absurd but long since exploded, he should gain the Glory of an Inventor.

The History of both Diseases being thus explained, it easily appears, how falsely a *purulent Spitting* is ascribed to a *Pleurisy* as a peculiar Sign: and in how trifling a manner they employ themselves, who invent ways, whereby this Matter in the *Pleura*, may be carried off by the Lungs. Some of whom suppose it to be imbibed by the Coats of the Lungs, others that it is re-absorbed into the Blood: and the more luckily the Fable is invented, they very ingeniously assign Vessels for this Office, either, indeed,

^a *Lib. 2. cap. 25.*

deed, the *Vena Azugos*, or the *Vertebral*, nay, and the *Bronchial Arteries*, according to the Sagacity of the Men who carry their Conjectures one while this way, then another. And upon this Foundation is that Method of Cure chiefly supported, which is laid down by the Writers in Physick, as well in a simple *Pleurisy* as in that which is joined with a *Peripneumony*; wherein almost all the Medicine which they would have applied, is directed to promote a Spitting: when yet in a simple *Pleurisy* there is oftentimes nothing concentered, which ought to be expectorated; neither, if it ought, can it be brought upwards without the intervention of a *Peripneumony*. Whoever therefore follows only this Method of Cure in that Species of *Pleurisy*, I do not see, indeed, why he should not prescribe Expectorants also in an Inflammation of the Feet.

This kind of *Pleurisy* is frequent, which may easily be distinguished even from that which is accounted *Spurious*: This sometimes passes into a Suppuration; and the Matter is either thrown into the Cavity of the Thorax, or is sometimes also carried off by Stool or Urine, without any Cough or Expectoration. The same also happens sometimes, when the Matter has been but sparingly carried off by Spitting. An Instance we have in *Pythion*, who was recovered by an Abscess arising after the fortieth Day in the hinder Parts, so that a great deal of the Matter was carried off with the Urine. There are *Pleurisies* likewise,

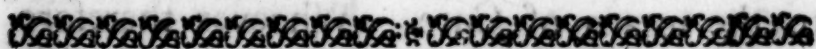
which are not succeeded by any Suppuration; which *Hippocrates* ^a, or some other Person, describes as joined with a dry Cough, and therefore calls them *dry* and *without Spitting*. And that these are true *Pleurisies* is proved from this, that the *Fever begins* also with a Pain in the Side. Therefore he says that they are cured very often by *Bleeding* and *discutient* Medicines. Hence *Aretaus*, who among the *Greeks* is second in Reputation to *Hippocrates*, both for his elegant Writings in the *Ionian* Dialect, and also because drawing most things from his own Store, he has not trod in the Steps of others, orders a Vein to be opened on the *first Day*. Neither is it to be doubted, that *Hippocrates* followed the same Method of Cure in this Sickness of *Anaxion*; and that in the beginning of the Distemper, when it had not reach'd the *eighth Day*, and the Matter of the Spittle was not yet digested. And I myself this last Winter attended many *Pleuritick* Persons, in whom the Spitting was of no signification: Who were yet all recovered by opening a Vein three or four times, and the application of *Vesicatories*. And in this state of Affairs, I should have readily affirmed that all *oily* Medicines, and such as are reckoned proper to promote an Expectoration, would have been of little service by themselves.

There are some perhaps, who may think such curious enquiries into these Diseases, may

^a *Morb. Lib. 1. 25. & 2. 42.*

may not be of much Service in the Healing Art. However, they must give me leave to affirm, that it is of very great importance to Physick, that we have an accurate Knowledge both of the peculiar Signs of each Distemper, and also of its Seat. For these being found, we shall be much happier in our Enquiries into the means of Cure. Whoever therefore perfectly understands the nature of a *Pleurisy*, will easily perceive, what immediate Relief may be had from opening a Vein in the beginning: For upon this point so depends the whole safety of the Patients, that, if you should depart from this kind of Medicine, in vain will you seek for any other. This Course in treating a *Pleurisy* was taken by *Sydenham*, who being little solicitous about Expectorating Medicines, took away large Quantities of Blood. Neither will any one forsake this Method, who is entirely acquainted with the Body or the Disease: Which, how accurately they ought to be known by a Physician, may be fully proved in this Affair by the followers of *Petronius*. For they, because they were ignorant of the Seat of the Distemper, and did not think that it had relation to the *Pleura*, therefore judged that Blood was by no means to be let. Thus great Mistakes ensue upon an Opinion falsely grounded in a matter, as it may seem, very trivial: And such danger attends these Fictions, especially about Diseases, that their Inventors, when they design a Cure, are extremely mistaken, and with the

followers of *Petronius*, either neglect those means which would be effectual in the Cure, or plainly reject them. Who, tho' they seem to aim at the best means, are not deceived indeed voluntarily, but by the Error of their Course,



COMMENTARY VI.

Of an Abscess: And of an Ulcer of the Colon, and the Bladder.

Remarkable is the Case of *Pythion*, related in the beginning of the *third* Book: in which an Abscess, at last, arising about the hinder Parts, since it carried off a great Quantity of the Pus by the urinary Passages, put an End entirely to the Fever. He that added the *Notes*, which are found at the End of these Histories, attributes this solution of the Distemper to the *copious discharge of Urine*: but that very wrongly; for *Pythion's* Recovery ought not to be attributed to the Quantity of the Urine, but to the Quality rather, as having been purulent. Neither is it a trivial Remark which *Hippocrates* often makes in these Books, that the Urine, as often as that purulent Matter was carried off by the Bladder, was generally voided with Difficulty and Pain, so that the Patient laboured under a Strangury. The reason whereof we shall explain in a more convenient place.

It

It is common enough for Diseases to be solved by an Abscess, which most frequently indeed comes upon Fevers and the Small-Pox, chiefly about the Ears and the Groin. Sometimes also there arise Tubercles spreading over the whole Body, which now and then suppurate. But this Suppuration, about the urinary Passages, is not so very frequent, unless in Persons afflicted with the Stone; at least, we find very few accounts in the Writing of Physicians, of any *feverish* Persons being recovered by it. Indeed it has been my fortune to meet but once with an Instance which answered to this of *Hippocrates*: yet, with this difference; that however the Fever might go off gradually by an Abscess being made, the Patient notwithstanding was not in the least recovered. The relation of which Case, as I have never read or heard of one like it, I do not think it improper to deliver at large in this Place.

A very ingenious and studious Gentleman, who was remarkable for his great Learning and singular Memory, fell ill about the beginning of *Autumn*, in the sixty third Year of his Age. He was seized with a Pain, Flatus, and a sort of Convulsion in his Bowels: His Stomach was greatly decayed. Some little time after he was troubled with a desire of going to Stool and making Water, a Strangury, a grievous Pain near the Groin and about the *Glans*, which was very exquisite, chiefly upon his just having made Water; a weight in the *Perinaeum*, about the Neck of the Bladder;

der; and all these Evils were both new and sudden. The Urine was at first difficult and interrupted; afterwards it was discharged with a great Impetus, and a certain Sound, as if some Wind had broke forth; in which there was the natural Colour, tho' nothing at all subsided. The Pain was easier either when he lay upon his Back, or was bent forward, or even when the Bladder was distended. And this uneasiness, in making Water, continued even to his Death. Sometimes he was attended with a Drought.

Much in this manner he continued till the middle of *November*; when he perceived his Pains immediately to grow violent, upon drinking any thing Hot: for two Days he throw'd up every thing by Vomit: he complained of very great Torment in his Intestines, and that the Abdomen was greatly distended.

Nov. 18. A violent Pain in making Water; an acute Fever with a Drought: which, however, after the third Day, were something abated. He voided some rough Gravel, about the bigness of a Pins-Head. The Colour of the Urine deeper; in which there subsided a great deal of glutinous and yellowish Mucus, interspersed here and there with Blood, and sometimes also with Caruncles and Excoriations: which was very little different from Pus, except that it was neither very smooth, nor ill scented. Such a Flatus often broke forth with his Urine, that the Patient seemed to break Wind backwards.

Nov. 26.

Nov. 26. The Pain returned, a Rigor arose, and the whole Body was seized with a Shivering. The Pulse quick, and depressed; his Tongue dry. The Urine very much tinged with Blood; which he could not discharge but by lying down in his Bed.

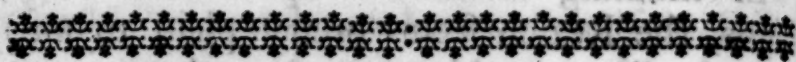
Dec. 3. A respite of his Pains, or rather his Sensation blunted. His Head began now to be affected. The Fever, which used daily to grow violent in the Evening, at last almost totally vanished. His Breath something difficult. His Urine sharp and ill scented: the Flux of Pus was so large, that it in a manner exceeded the Quantity of Urine. Amidst this train of Evils, he was gradually seized with a Stupor in his Senses. Thus the Vigour of this Gentleman's Mind, than which, nothing could be either brisker or more acute, was at length benumbed with a Lethargy. But who will not justly pronounce him Happy, either, in that he dragg'd on Life so long exempt from Pain; or that, since he could no longer enjoy Life without Pain, he ceased to live? His Body being opened, the urinary Passages were narrowly examined. For we were as intent upon the dissecting him, as if we had been sure of finding a Stone. But neither in the Bladder, nor in the Ureters, nor in the Kidneys themselves, were there any the least signs of Gravel or a Stone. In our farther enquiry into his Bowels, we found the Colon adhering so firmly to the Bladder, that it could hardly be separated with the Knife. And in that

that part where it adhered, was observed a round Ulcer, about an Inch and half in Diameter, which had entirely consumed not only the Coats of the Colon, but had also eat thro' the external Membrane of the Bladder. Hence a Perforation was made thro' the Middle or musculous Coat of the Bladder, which would receive a Goose Quill: from whence there was a continual Flux of Pus, from the Ulcer into the Bladder, and a Passage opened, whereby the Flatus's passed from the Intestines into the Passage of the Urine; of which indeed, while he was living, we falsely believed him only to have dreamed.

By this time, I believe, it is sufficiently clear to the Reader, that all the Signs preceded here, which are accounted essential to a Stone in the Bladder. And for our not doubting hereof, it was a very strong Argument, that they shewed themselves so very clearly. But we were at length convinced of our Error, by that most excellent Mistress in investigating the causes of Diseases, *Anatomy*. In such a Case therefore, where there is any suspicion of a Stone, unless it be felt by the *Surgeon* in searching, it is not good to pronounce any thing very confidently about it. For we should not be ashamed, if we are not always so fortunate as to guess, by what means Nature either produces or carries off Distempers: at least, it is more honourable to confess that we know nothing, than being at last convicted in a groundless and vain Opinion we should be shamefully confounded. In

In thinking oftentimes upon these very Signs, the Reason seems pretty plain to me, how the Pus was able to produce them, even without a Stone. For I very well understand, as I imagine, why the Pus, stimulating the inner Membrane of the Bladder, should excite such a train of woe: why, from the same cause, it should raise a desire of making Water and going to Stool, why a Pain even to the extremity of the Glans: why it should bring on an heat and dripping of Urine, either remaining about the Neck of the Bladder, or passing from thence thro' the Urethra. The only difficulty is this, how it should come to pass that the Efflux of so small a Quantity of Pus should occasion the sense of any Weight, and that no very small one: for there was a continual heaviness about the Pubes, such an one as is usually felt from the Pressure of a Stone. Which ever way I turn this Argument, I receive, I confess, very little satisfaction in it; therefore leave it to be discussed by those who are better skilled in this kind of Science, and shall return my thanks unto them, who will produce any Reasons of weight in so abstruse an Affair.

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COMMENTARY VII.

Of Purging: what Effect it may have in the putrid Fever, which comes upon the confluent Small-Pox, and in an Erysipelas of the Head.

IT is manifest that many of the Diseased, as B. 1. 10. B. 3. 3. Sect. 2. 9. were recovered by a *Looseness*. Of which kind of Relief *Hippocrates* says so many things in the *Epidemics*, that he observes this to be the most frequent Method which nature attempts towards the carrying off these Distempers. The same is also proved by those Masters of Physick which have since followed from repeated Experience: neither does *Fernelius* ^a rest here, but denies that a continual Fever can be solved either by a *Sweat*, or a *Flux of Blood*, or, lastly, by an *Abscess*, and affirms, *that it can be safely and perfectly carried off by a spontaneous Looseness only*. For nothing but this (says he) can throw off the putrid Matter of the Fever now perfectly concocted, and empty the Viscera and greater Vessels overwhelm'd with a Load of Filth, without a loss of Strength and offending Nature. In imitation therefore of the Custom and Instruction of Nature, *Hippocrates* himself sometimes attempted this Method of Cure

^a *Method. Med.* 70

Cure in acute Fevers: whom I find some of the *Moderns* have followed, both frequently and with success. And truly if any relief may be had from Purging in these Cases, the *Moderns* seem to be able very safely to institute it, and that indeed better than the *Antients*: for the purging Remedies which these made use of, were none but what were very acrid and violent; the others have long since brought into use, those which are extremely mild, and which very easily answer the intention of the Physician.

There are some kinds of Fevers, which may very well admit of Purging; and there are also some which absolutely require it. However since this is a very spacious Field, this Method of Cure is attended with so many difficulties, that Authors have neither delivered Rules about it sufficiently accurate, neither can they be given without a great deal of Pains and Judgment. For even to a Person of Experience is it by no means easy, to follow his Opinion of this matter so, as not to err; but to explain it in writing, so that others shall not fall into a mistake, extremely difficult. It must be left therefore to Physicians to acquire this prudent discernment by Practice and Experience.

The only Task which I shall now undertake is, to describe some certain kind of *Fever*, in which, more especially, *Catharticks* may be effectual. Since therefore the Question is very simple and obvious, the more easily will what we have to say be explained. And among *Fevers*, indeed,

indeed, I do not find any one so liable to a Purg-
ing, as that which follows upon the confluent
Small-Pox, while they are either at the height
or already upon the turn. For as this Fever is
the most putrid of any, and very dangerous,
so does it more conveniently admit of this kind
of Cure than the rest. This Disease, since it is
extremely common and well known to every
Body, it may seem impertinent to describe it in
this place: I shall only touch upon those things
which more nearly relate to this Method of Cure.
And in what manner and at what time, chiefly,
it ought to be followed, will more clearly ap-
pear from a particular relation of each Case,
than if it was generally and universally ex-
plained: and I am the more induced to do this,
because the Readers may expect, and with some
right demand it in a new Subject. I shall there-
fore endeavour to give them satisfaction.

Case I.

A Person of Quality, in the Prime of
his Age and Strength, was seized with
the *Small-Pox* Feb. 3. 1709. which in their E-
ruption occasioned an exquisite Pain in the Back.
The Physicians who were first consulted order-
ed a Vein to be opened, and a Vomit to be given.

Feb. 6. The whole Body, as well as
Face, was spread over with an infinite num-
ber of Pustules, small, depressed, and conflu-
ent; resembling on the Cheeks a sort of Pel-
licle:

licle: in other Parts, after the first impulse in coming out, they rose very slowly. He used a thin and temperate Diet: the chief part of his Medicine was *Confect. Fracastorii* dissolved in *Aq. Lactis* or *Cerasor*. It was with great difficulty he could get any sleep: and this proceeded not only from his Sickness, but also from his natural Temper: so that, when he lay sometime ago ill of a Fever at *Genoa*, he could hardly sleep for near seven Days together.

The *Spitting* proceeded pretty happily for three Days, although moderate; afterwards it totally ceased. Which to me foreboded very great danger, though to others it may seem otherwise, who imagine that this Flux of Spittle in the *Small-Pox* proceeds from I know not what malignity of Nature. Indeed however malignant it may be, it seems almost necessary in this Distemper, when it is of the confluent kind. *Sydenham*, who has most exquisitely well described the *Small-Pox*, tells us, that he saw but one Person, who had no spitting in this confluent kind: which he judged when it proceeded regularly, to turn as much to the advantage of the Patient, as if the Face was duely swelled, or the Pustules had attained their maturity.

Feb. 9. The Pustules about the Chin were become almost black: and those which had run together upon the Cheeks resembled Parchment or Ice in smoothness. The Fauces being over-run with them were full of Pain: the Face was moderately swelled. In the Evening an Ounce

Ounce of *Oxymel Scilliticum* was exhibited to provoke a Vomiting.

Feb. 10. He fancied himself something refreshed. The Face was more swelled, though still more depressed, than the Nature of the Disease required. The Spitting returned; but after ten hours wholly ceased. A little before Night a Vesicatory was applied to the Neck.

Feb. 11. The Hands a little swelled. But lest any thing more dreadful might happen at this dangerous time, (for it was now the *ninth* Day) it was agreed to apply *Blisters* to the Arms in the Evening. Nor indeed was this done too soon; for there began to be both a *sub-sultus Tendinum*, and a Convulsion of the Lips. He was extremely restless all this Night: for the Fever burnt vehemently, and there came on a Delirium, and a Tremor of the whole Body.

Feb. 12. In the Morning he was not capable of either speaking or swallowing: therefore all hopes of his recovery were in a manner lost. However a *Clyster* was injected, which worked very well. In the Afternoon, when the *Blisters* had happily succeeded to our wishes, he came entirely to himself: the Fever and the distension of the Nerves were abated. The Pustules being dried fell off from his Head: which was every where so over-run with small Ulcers, that it plentifully throw'd forth a thin Humour, as if it had been eroded by a *Vesicatory*. The same happened also some short time after in the Face, where a very great quantity of fresh Matter

Matter oused out from under the Crust now beginning to dry up.

Feb. 13, & 14. The Fever continually remained: the Pulse however, which had been very unequal ever since he had been ill, was now more composed. The Tumor wholly subsided. *Cardiack* and *Diaphoretick* Medicines had been given several Days without any success: neither did any sweat or moisture break forth. Therefore I advised another Clyster: but from hence this Danger was apprehended, that, if it should move the Belly more than once, it would bring on Death. But it was at last applied, and, by occasioning two Stools, it yeilded some small relief.

Feb. 15. Again a new violent *subfultus Tendinum*. The Delirium returned at short intervals. For neither was the Fever yet gone off, nor had we received any advantage from that Method of Cure which we had instituted. Upon this account therefore, because bleeding did not seem likely to succeed happily, I mentioned a gentle Purging. I received many answers about the danger of Stools: and that they had tried this Method of Cure, but that it never proceeded according to their Opinion, however, I replied that I had sometimes made use of it with very great success; and that there was no other kind of Remedy left, which would avail in this Patient's desperate circumstances. For the *Small-Pox* had long since done its part; neither was there any likelihood, that any thing more would be thrown off by
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the cuticular Passages: we had too long labour-ed at this our selves; and it clearly appeared that this purulent Matter, by which the Fever was confessedly supported, ought to be brought off by some of the outlets of the Body. The Clyster had given two Stools, from which there was neither danger of any Flux, or any loss of Strength. I desire to know, for what Reason, after the *Small-Pox* are gone off, the Physicians of all Nations should prescribe *purging* Medicines, unless it be to discharge the remains of this Matter from the Blood, which if they should continue inwardly, would prove hurtful. Mr. *Bussiere*, who dressed the Patient's Ulcers, related the Case of his Nephew, who being in a Fever from the *Small-Pox*, was perfectly recovered, by this manner of Purging on the *seventeenth* Day. They contended for *Cephalick* Medicines which are reckoned proper to remove a Delirium and Tremors of the Nerves: which Method of Cure, how well soever it might succeed, might cut off some Branches of the Disease, but could not wholly eradicate it. For however the other Symptoms might be abated, the Fever, which was the cause of the Disorders, still remained. Nevertheless we prescribed *Spir. Cranii. humani, & Sal Armon. Volat.*

Feb. 17. In the Morning his Fever and Convulsions raged more violently, and he became plainly *Comatose*: he had taken no Opiate for three Days before. I therefore again insisted upon his being Purged, but was opposed after the same

same manner as before. A new Argument arose from this accession of the *Coma*, namely, that there was danger, lest the Patient, if he was purged should die of too great a Flux: for that such a Flux is ranked among the most fatal Symptoms in a *Coma*. With which Method of Arguing I confess I was the less satisfied, because this very *Coma* was nothing else, than a Symptom of the other Disease: but if it had been the primary Distemper, even then Purges cannot reasonably be forbid: which I find to be practiced by all Physicians, when the Belly is too much bound in a *Coma*. And this loosening of the Belly in a *Coma* is so far from being dangerous, that sometimes when it happens spontaneously it carries off the Distemper. But it was thought most proper to trust to *Cephalicks*: to which end a *Fulep* was ordered. After Noon the Fever raged so a-new, that the Patient was reduced to the same streights, under which he laboured *six* Days ago. It was therefore prognosticated that he would die that very Night; and the Relations departed as having perform'd the last good Office. In these dangerous Circumstances it was very much doubted, whether Medicine would avail any thing or not: and indeed if there was any ground for hopes of recovery, it seemed to depend chiefly upon his being purged. And that this might be done I was for a long while very solicitous: which if it had, might have been of some service, as his strength was not yet entirely wasted. In such an extreme

danger, however, it might have been better to try a doubtful Remedy than none. They declared that he would die whether he was purged or not: yet by no means would they agree to Purge him: affirming that as it was irregular with regard to Practice, so in their Judgments was it absurd. But at last we came to this agreement, that the following *Catbartick* should be taken at nine of the Clock.

R. *Decoct. Sen. Gereon.* 3 iv.

Sal. Mirabil. Glaub. 3 i.

Aq. Cinam. bord. 3 vi. M.

In the space of about three Hours, he had two large Stools; which were both solid and black, as also extremely fetid. Mr. *Bussiere* who was present, can testify how suddenly the Convulsions abated. The Fever much lessened, and the Pulse became stronger. The *Coma*, with which the Patient was greatly afflicted, vanished: after some Hours it returned, but not indeed with the same violence as before.

Feb. 18. Every thing for the worse, and the Fever especially extremely parching. Therefore a *Vesicatory* was a second time applied to the *Neck*. In the Evening, since he was still living beyond our expectation, and since it seemed convenient even now to try what Medicine might be able to effect, mention was made of *Flos Sulphuris*. When I enquired what effects might be expected from that Medicine, I was answered that it might perhaps loosen the Belly, and possibly also raise some swelling: for that it was very efficacious in driving out the

the Humours. That it had been lately given in a like Case, whereby the Belly was very often moved and the Patient restored to his Health. If it would loosen the Belly, indeed, I should be very much pleased; for that was the only Method of Evacuation left, whereby we could seem to promise the Patient any safety. He therefore took a Drachm of *Sulphur* at twice. Which did not in the least move the Belly. About Midnight, since the Blister ran plentifully, He entirely recovered his Senses: no remains of the Delirium or *Coma*: the Convulsions hitherto not so moderate: the Fever wonderfully lessened: and the Pulse both stronger, and more distinct. His Face which seemed to have been well, broke out again with a fresh supply of Matter. He remained much in the same state for about *thirty* Hours.

Feb. 19. We were greatly pleased with this happy prospect of a Recovery, and left Nature to perform her own Office. In the Evening, when we were consulting about the means of Cure, I took occasion to say something of the advantage we had received from *Evacuations*: telling them that we had the plainest Reasons in the World for continuing the same Method of Cure, lest the Disease should return. The contrary was urged: it was true indeed, that the Distemper was greatly alleviated: but yet that did not proceed either from the *Vesicatory*, or from the *Stools*, but from the *Sulphur*. That it was a very difficult matter to determine, where several Remedies are applied, which

ought to have the greatest share attributed to it in removing the Distemper. I grant it: but it is proved by daily Experience; that a Fever and Delirium are usually removed by *Plisters* and *purging* Remedies, but it was never heard that they were carried off by a Drachm of *Sulphur*. Indeed those Stools which had been procured, although they had not wholly broke the force of the Distemper, yet they had greatly lessened it: whereby the Belly was not only freed from a superfluous, but also noxious Load, nor had any ill-convenience ensued, which was so much dreaded. The Purge seemed rather to have encreased the strength, than to have exhausted it; which if it had not been exhibited, there was danger, lest the sole force of the *Vesicatory* should not be able to extricate the Patient out of this cruel necessity. Certainly if that load of putrid Matter which was carried off by Stool, had still remained within the Body, there could have been hardly any hopes of receiving any advantage from any other Medicine. But was not there more eminent Danger from so much putridness contained inwardly, than from a Medicine, which might discharge it from the Intestines? For the Case itself clearly shews, that Nature oppressed with too great a Weight must sink: that that Matter which cherished and supported the Disease had not been sufficiently exhausted by the suppuration of the Pocks: and further, what way was there left of effecting this, of which there was so great a necessity, but by causing a gentle and continued

continued Purging by Stool; which could be done without any hazard of Life. For it might easily be observed, that making any *Evacuation* whatever, whether by the help of *Blisters*, or a *Clyster*, or *Purges*, the Distemper was greatly alleviated for a time, and the Pulse perpetually strengthened. As to *purging* Medicines, indeed, *Sydenham* prefers them to all other Methods of Cure, in these putrid Fevers, which come upon the *Small-Pox*: and that celebrated Practitioner *Radcliff*, assured me that the same Method had been often instituted by himself, whose only aim in prescribing Remedies, which he did with the greatest reputation to himself, and no less advantage to the Patient, was to follow Nature in all things as his Guide. So far indeed is this Method of Cure from being a modern Invention; that it may contend for Antiquity with the Distemper itself. For *Rhazes*, who is the chief among the *Arabians* both with regard to Authority and Antiquity, and who first of all not only described the *Small-Pox*, but explained those two kinds of them which we have at present, has delivered down to us in Writing this remarkable Case. “*In a Girl* (says he, after the “*Pustles of the Small-Pox were fallen off)* “*there remained something of an acute Fever,* “*and I thought it to be the residue of the Hu-* “*mours which were not carried off by the Eva-* “*cuations, and that it could not be suddenly* “*and at once wholly purged off by reason of her* “*weakness; however I made her take every*

*" Morning for fifteen Days Aquam Fructuum,
 " and a Ptisan, of which she drank twice a Day,
 " and was by this means thoroughly cleansed."*

This Account of *Rhazes* is largely illustrated by *Zacutus*, who has also added a very pertinent, and that no trifling, Remark to the observations he has made from this Case: *" Altho'
 " the Ulcers in the Skin are not wholly dried up,
 " a very gentle Purge will be always useful, be-
 " cause we do not then regard the Small-Pox,
 " but a new Disease, which, since it arises from an
 " untoward Humour, if it be not purged off, may
 " commit such Disorders, which afterwards will
 " admit of a very difficult Cure, or none at all.*

But granting we had no Authority, no Example of this Method of Purging; yet, even from this very Experiment, which we ourselves have made, I imagine the Reason to be very plain, why we should agree, at this time especially, to insist upon it. Which, if it was always hurtful, in this Extremity of the Disease, ought to have hastned on Death, and not to have raised in the Patient some hopes of a Recovery. But should we allow it no share in the removal of the present Danger, it cannot be denied at least, but that it may be pursued with the greatest safety: that it has already been made use of, whereby the Patient was greatly relieved, neither did any disadvantage follow. So groundless was the apprehension of too great a Flux. However, even yet, they could not help frightening themselves, but that, if this happened, the Patient would

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be greatly endangered. Neither did they omit observing, that many things were delivered by *Sydenham*, with an air of Assurance, which were not supported upon any foundation: for Example, that what he says about *Riding* as if it was as infallible a Remedy in a *Tabes*, as the *Peruvian Cortex* in an intermitting Fever, was refuted by daily Experience. What *Sydenham* has done in the other parts of his Writings, I will not take upon me to determine: in these which relate to the Small-Pox, he has handled them so fully and accurately, that he ought justly to be preferred to every one who has treated of this Subject. But what we find in him about giving Purging Medicines in this stage of the Disease, he has delivered in that Work ^a, with which he last obliged the Publick; as if it was the final determination of his Judgment, and which he had confirmed by long Trial and Experience. In which Method of Cure he was so far from proceeding rashly, that, if we may be allowed to say the Truth, he was rather over timorous; for he clogged it with too many Difficulties, and would not suffer it to be made use of, but when the *Distemper* was going off ^b, but on the *thirteenth Day*, and not then unless *Bleeding preceded*: since we find it may be pursued with the utmost Safety, both without Bleeding, and before the thirteenth Day, and also when the Disease is at the highest: but as he had learnt this late,

^a Schedul. Monit.

^b Sched. Mon. 91.

when he was advanced in Years, so he ordered it with some fear and diffidence.

But the Question about *Sulphur*, was again canvassed: that it was a great Argument of applying the same Medicine, since it had succeeded so well; that there was no other Rule to be followed in the choice of our Remedies; and that we might perhaps gain this Advantage, that a Tubercle might be thrown forth by the *Sulphur*. I thought, for my part, it would be of little service to prescribe *Sulphur*: because unless it would loosen the Belly (which that it would not in the least do was very plain from Experience) it would raise an Heat, and kindle the Fever anew; which we always find to be heightened by *Diaphoreticks*. But, on the other hand, it was affirmed, that it was a good *cooler*, and that a very cold Oyl was drawn from it. Certainly, if we esteem them both according to their Vertues, there is a great difference between the Oyl and the *Flowers*: for every one, who is conversant in Chymistry, knows that there are two Parts, and those widely different, contained in *Sulphur*; and that the Oyl may be rightly drawn off, those Parts, of which the *Flowers* chiefly consist, must necessarily be sublimed by Fire: therefore, if the *Bell* should grow Cold, the Oyl would not so readily be separated. From an Hundred Pounds of native *Sulphur*, proceed about five of Oyl; out of the same Quantity, when the *Flowers* are sublimed, that Part, which is called the *Caput Martuum*, does

does not exceed twenty Pounds. So that, since the fixed and acid Parts bear no proportion to the volatile, *Sulphur* itself is always accounted Hot: and I believe there is no Author extant, who does not rank it among the hotter Medicines. If this Drug is so well adapted to cool the Humours, what Efficacy could it have, as is said, towards driving them out? That it is Hot, is proved from its Effects; for it both provokes Sweat, and ripens cuticular Abscesses. That nothing could be more desired than a Tubercle: however, since there was no appearance of it, I could not easily understand, how the *Flos Sulphuris* should at last produce it.

But in malignant Fevers *Hippocrates* himself made use of *Sulphur*: this, however, is an egregious Mistake. For tho' it is plain from History, how wonderfully *Hippocrates* succeeded in curing the Plague; yet, by what Medicine he performed it, is entirely unknown. There is not indeed the least mention of it in *Hippocrates's* Writings. Neither is there any account in the Records of the Antients, that he drove away the Distemper with this Remedy. *Helmontius* indeed, a very enthusiastick Writer, pretends that this Secret of *Hippocrates* was revealed to him by an *Angel*: which Fable is indeed transcribed by that good Man *Kircher*, as a serious matter, and also illustrated with his own Commentaries. These Persons, however, declare that the design of giving

giving *Sulphur* in the Plague, is to provoke Sweat; and at the same time show how it ought to be prepared to succeed happily. Most of the Moderns prescribe *Flower of Sulphur* in the Plague for the same End; and is therefore placed by them in the Class^a of *Diaphoreticks*. But, supposing *Hippocrates* did prescribe *Sulphur* in malignant Fevers? How far would that prove it was proper or convenient in this Patient's Circumstances? If we are allowed to reason after this manner, many Instances might likewise be produced, where *Purging* has been of very great Service, in the same kind of Fevers: which, what Efficacy it may have in the greatest Extremity, is clearly proved by *Riperius*^b. Besides we have been promised that the *Flower of Sulphur* should occasion a Stool; but if this could be proved, supposing the *Flower* should excite it, why may we not make use of a Medicine, which would undoubtedly have the same Effect? Whether or no it would be a greater Injury to move the Belly twice with *Lenitive Electuary*, or some such thing, than to have done the same by *Flos Sulphuris*? Why truly this had been given to a certain Patient, and it purged off the Humours very violently: this was proof enough, that a moderate Flux in this Distemper could never be excited without Danger. And indeed this is abundantly evinced from Experience, how in this putrid Fever, even when matters have been brought to the greatest

^a *Diemerbroeck de Peste* 124.

^b *Observ. Cent. 3. 87.*

est Extremity, by the Belly being loosned spontaneously, or irritated by a *Clyster*, Health has been restored. At present we do not wholly despair of the Patient, he has Strength sufficient to undergo this kind of Medicine, and we have time enough to make the Experiment. For he was both recovered from his Faintness, and passed his Time tolerably free from the Fever: His Pulse was become stronger, and very nearly approached to its natural Slowness: and likewise a laudable Sediment in his Urine. For his Urine gave very good signs thro' the whole Course of the Distemper, tho' it now and then, in the *Comatose* Fits, came away in a small Quantity, and that sometimes involuntarily. Thus he passed this Day and the next. The Remedies already prescribed were repeated: for we came to no Agreement, either about the *Sulphur* or any Purging Medicines.

Feb. 20. In the Evening every thing inclined to be worse. I could hardly obtain a *Clyster* to be injected: which, lest it should seem to have been of too much Service, was prevented by giving, as soon as possible, half a Drachm of *Sulphur*.

Feb. 21. In the Morning, we were informed by the Persons who sat up with him, that he was relieved after the *Clyster* came away, and had passed the Night quietly. So great were the Effects of having taken *Sulphur*! But matters were found much otherwise: for both the *Coma* was returned; and all the other Evils were

were at this time encreased: nothing subsided in the Urine. *Blisters* were applied to both Thighs. About Noon we prescribed *Calomelanos* gr. viii. with *El. Lenit.* 3fs. dissolved in *Aq. Lactis.* But the Belly was not in the least moved. Therefore, in the Evening, a Clyster was injected, neither then did any thing come down but very sparingly.

Feb. 22. He passed the Night very restless; very much disturbed in his Mind; and seemed now near his End. However, about Midnight, he took the same things again to move the Belly. Whereby he had three Stools; which was so far from carrying him off suddenly, who was already even in the Jaws of Death, that,

Feb. 23. In the Morning the Delirium entirely vanished; neither was there any Faintness or Convulsion remaining. But a weak Pulse, and his Strength wholly exhausted. When he had dragg'd on Life for some time in this manner, *Feb. 24.* He died universally lamented. Which Day, if we follow *Sydenham's* Computation, is the *four and twentieth* of the Disease; for on the *first of Feb.* he was seized, and on the *third* the Small-Pox came out. So that it exceeded that Term by *three Days*, which *Sydenham* ^a supposes to be the Bounds of this Distemper.

I have been the more full and prolix in the relation of this Case, with an intent only, that, since this Method of Purging was neither

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^a *Sched. Monit.* 77.

customary or agreeable to the Sentiments of the generality of Physicians, the Reader might be able to judge by this distinct Explanation, what Efficacy it may have, and what good we may reasonably expect from it. Which kind of Medicine, I confess, has been so little received into Practice, that I do not at all wonder that the most part are so greatly averse to it. Let every Man enjoy freely his own Judgment: neither do I doubt but that those Gentlemen, from whom I have dissented, have Arguments enow to defend their own Sentiments. They were pleased with their own Opinion, I perhaps too much with mine. If any thing has been spoken with too great a Liberty, let it not be thought to have been done out of a Spirit of Contradiction, but with a desire of finding out the Truth in so important an Affair. Perhaps I may have been too sharp and positive in this Case; both, because I was firmly persuaded of the usefulness of this Medicine, and also because I had the greatest Love and Esteem for that Noble Youth. But let us give over this Argument, whence we can, at present, deduce nothing but matter of Grief and Sorrow.

To return, therefore, from whence we have digressed; I have been oftentimes obliged in Practice to have recourse to *purging* Remedies in the *Small-Pox*, when the Fever has not been at all abated, tho' the Pustules were drying off. Which I have experienced to be so free from Danger, and so capable of being suc-

successfully applied, that I might with good Reason affirm, that the Lives of many have been preserved chiefly by this Method of Cure. But that both the Time and Manner of instituting this kind of Medicine may be better known, give me leave to select this Case out of many, and that, as it seems to me very singular.

Case II.

ONE — *Brown*, a Servant to *Bampfylde*, Bart. who was just recovered from the *Small-Pox*, fell into the same Distemper, *Jan. 6. 1710.* The Pustules arose about the Temples: which afterwards, proceeding according to the Manner of the Disease, covered over in great Numbers, not only the whole Face, but all his Limbs and Breast. They were both small and confluent; otherwise no ill Symptoms.

Jan. 9. He complained of a Swelling of the Jaws, and a difficulty in Swallowing: from which he was relieved by the Application of a *Vesicatory*. He reached the *twelfth* Day pretty well, without any grievous Complaint; on the Day before he had two Stools by the help of a *Suppository*. The Pustules were now all dried off: the Swelling was gone down on the Face, and abated also some small matter on the Hands. But on the *twelfth* Day from their Eruption (which is the *fourteenth* with *Sydenham*, and which is reckoned by him,

in the malignant kind to be extremely dangerous ^a) the Fever burnt vehemently, with a quick and low Pulse: the Skin appeared as it were of a Flame Colour: there was a *subfultus Tendinum*, a *Delirium*, and difficulty of Breathing. The foregoing Night he had no Sleep at all. In these dangerous Circumstances, *Sydenham* ^b prescribes Bleeding; but does not allow the Belly to be moved by any means, before Blood is let ^c.

But that Regulation, which he seems to have followed, is not always the most convenient: therefore, altho' it is sometimes of very great service to open a Vein, yet I thought myself obliged to depart from this Rule, both because I judged from his *Pulse*, that Blood ought by no means to be taken away, and also because I have oftentimes observed in other Cases, that the Strength was less diminished by a gentle Purge, than by Bleeding: and likewise that this Method of Purging might be happily followed, when Bleeding had been omitted.

Wherefore on the *thirteenth* Day, namely, the 18th of *January*, he took *Extract. Rudit.* gr. xvj. dissolved in *Aq. Pæon. C.* whereby he had *four* liquid, mucous, and ill-scented Stools. His Pulse immediatly grew stronger: the *Delirium*, however, and the Convulsions remained. In the Evening, *Blisters* were applied to the Arms; and he took an hypnotick *Draught*, which was continued the succeeding Nights.

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^a Sched. Monit. 77.^b Ibid. 87.^c Ibid. 91.

Jan. 19. No alteration of the Symptoms, altho' the *Blisters* had made a very great Discharge of Humours: at ten of the Clock he took *Elect. Lenitiv.* 3fs. dissolved in *Aq. Laet.* whereby having *two* Stools he was relieved. In the Evening however every thing raged a-new with the Fever. I therefore ordered *Blisters* to be applied to both Thighs. In the Night he had six Stools more like the former.

Jan. 20. In the Morning, the Pulse more strong and sedate; the Brain something relieved, tho' not wholly free. The Tremors remained. I prescribed Morning and Evening for a Day or two a Medicine compounded chiefly of *Confect. Racast.* which should neither check the Flux too much, or suffer the Strength to be worn away. This Day however he had *two* Stools. In the Night *eight* more.

Jan. 21. The Pulse was brought almost into good order, the other Symptoms likewise grew better. This Day he had *four* Stools.

Jan. 22. The Fever, together, with the other train of Evils, went off. The Patient found his Strength renewed, altho' he had several Stools for the three following Days, and was at length perfectly recovered. It is well worth observing in this Case, that he had almost *thirty* Stools in the space of *four* Days, even while his Fever was very high, and his Strength greatly afflicted; from whence however he never found himself to grow faint.

Witness *Anthony Baller*, Apoth.

From

From this single Instance we may learn, how opportunely Purging Medicines may be applied to this putrid Fever: and how those *Canons*, as they are called, laid down by a late Author, are supported upon no foundation at all, namely, ^a “*that a Cathartick, especially of the stronger kind, ought by no means to be given, before it is certain that the Poison is wholly expelled, by the Appetite and Temper being wholly restored, lest the Spirits languishing, the Poison confined within should bring on a Caries of the Bones, Hypercatharsis, or any other grievous Disorder.*” Many accidents, indeed, frequently happen upon the *Small-Pox*, many are related by him in the Cases he produces: but if I may be allowed to speak freely in this Matter, great part of them seem to have happened chiefly upon this account, that a Purge was not timely enough prescribed. At least in those *two* Cases ^b where he tells us, “*That, at the end of the Distemper ^c, the use of Catharticks was wholly deleterious, and brought on a Caries of the Bones.*” Catharticks are accused with great Injustice. For the Reader will I believe easily observe, that the *Venom*, to use the Author’s expression, had entirely insinuated its *deleterious* Quality before the *Cathartick* was ordered: and that it could by no means be extinguished, if that had not been given. But let him be, as he has been, extremely averse to this manner of Purging, either because this Method of Practice did not please him,

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^a *Pyretolog.* 313.^b *Ibid.* 59, 60.^c *Ibid.* 312.

him, upon the account of its novelty, or those Persons, perhaps, who made use of it, were not in his good Graces: do not let us wait with him, till the *Venom* shall have destroyed the Patients.

However, be the Opinion of the Reader what it will concerning what has been said, I perswade myself I shall merit his regard by publishing the Sentiments of the most celebrated Physicians in this Matter. Whatever therefore remains farther to be said upon this Argument, may be found in those learned Epistles, which they have been pleased to honour me with.

To Dr. John Freind.

DEAR SIR,

I Return you thanks for communicating to me that singular Case in the confluent Small-Pox; and that it may plainer appear how fully I am of your Opinion, concerning the use and necessity of Purging in the secondary Fever, which attends the decline of that Distemper, I send you an Account of a certain Patient who was committed to my Care; whose condition about the end of the Disease was much the same as that related by you: besides the Distemper itself, since in one Stage it was pretty mild, and in another extremely violent, seemed well worthy our observation.

April

April 9. *A Youth thirteen Years of Age was seized with that Species of Small-Pox, which Morton calls Cohærent: it was attended also with a Delirium which continued even to the twelfth Day of April, although ten Vesicatories had been applied.*

April 18. *Namely, the ninth Day from the Eruption of the Small-Pox, early in the Morning the Swelling of the Face subsided; the Pustules were wholly crusted over, and the Patient seemed almost out of danger. But in the Afternoon he was suddenly seized with Tremors and Spasms almost in all his Limbs: but in a more remarkable manner were the Muscles of the Neck and Head convulsed. The Ptyalism was wholly suppressed, the Swelling of the Hands gone down, and a violent Fever also came on, with an unequal quick Pulse, and a Delirium frequently returning. This Night a Cardiack Bolus with a Julap was prescribed, and Blisters also applied below the Arm-pits.*

April 19. *In the Morning the Spasms were something abated, but the Fever still remained. Upon considering the Pulse, I thought that any Blood could not be taken away safely; in order therefore to make some Evacuation I ordered a Suppository, with which he had but one, and that a very large Stool; whereby the Youth confessed himself greatly refreshed. In the Evening the Cardiack Medicines were repeated, and a paregorick Draught. He slept very quietly till Midnight, entirely free from Tremors and Convulsions; which yet returned again*

the next Morning about three with great Violence.

April 20. Most part of the Scales were fallen off his Face; and almost all the Pustules upon the Trunk of his Body dried up; those which were dispersed over his Hands and Arms, were flaccid and almost dried; the Fever in the mean time not at all abated.

Therefore, since I found the Patient was much better the foregoing Night after a Stool, I ordered a Clyster to be injected this Day, which might move the Belly something more than the Suppository had done the Day before: the Clyster being come away, he again took a Cardiac Bolus with the Julap: and upon this account, indeed, was I determined to continue the use of Cardiacs, because upon taking them he always fell into gentle Sweats, by which means the convulsive Motions were for some time removed, although the Fever was no wise abated, except after the Evacuations made by Stool. Three very large Stools followed the use of the Clyster, without the least loss of Strength; from this time also the Delirium vanished; and the Fever was abated, or rather wholly carried off.

Therefore in this State of Affairs, being moved by the Authority of Morton, I resolved to try what the Cortex Peru would avail towards preventing the return of this Fever, which I ordered to be given at due intervals.

But on the 21st Day, the Fever and Spasms attacked him again with great Violence: therefore another Clyster was injected with the same success

success as the former: this Day and the three following the Cortex was repeated; however at a stated time both the Fever, and Spasms returned every Day. Therefore, after we had sufficiently found, that the Fever, notwithstanding the use of the Bark, returned daily, although the Cardiack Medicines had fully discharged their Office in throwing out the Sweat; I judged that the whole Matter might very safely be trusted to a Cathartick, which had hitherto succeeded so happily: in the Evening therefore on the 23d Day, I prescribed a lenitive Potion, and gave another again on the Morning following: upon taking these, the Patient had four very large fetid Stools, neither did he afterwards perceive any return of his Fever or Convulsions.

This is what I had to communicate to you at present; from whence, as I imagine, it may be very clearly understood, not only what an effectual Method of Cure Purging is in this kind of Fever, but also how little, setting Catharticks aside, every other kind of Medicine avails. I shall be abundantly rewarded, if these Reasonings should be acceptable to you: for if ever I should advance any thing which may be of service to Physick, I shall always impute it to that intercourse of Studies, which has passed for many Years between us. I am

SIR, &c,

Christ-Church,

Oxon.

Jul. 20. 1719.

R. FREWIN,
LEARNED

LEARNED SIR,

BEING ever ready to answer Your Requests, I shall endeavour to inform You, with the the greatest Fidelity, of two Cases particularly, among the many physical ones I have cursorily collected, because, however imperfect they may be, they are of a later Date.

While the Small-Pox were very Epidemick, I had some friendly Discourse with You, about Evacuations, and the various Methods of Evacuating in Eruptions of this Kind, as well as in other Fevers, which are called Putrid: therefore, as this our familiar Conversation, so also shall the following Cases, more especially regard this loathsome Epidemick Distemper.

Being called, two Months since, to a Gentlewoman about thirty or forty Years Old, who laboured under the Small-Pox, and those chiefly confluent, (as the Custom is among the Physicians in this Distemper) I prescribed Alexipharmicks, and those mild ones, till the sixth or seventh Day; afterwards Blisters were applied to the Neck and Arms, and the Patient took every Night a paregorick Draught after a Cardiack Bolus. On the eleventh Day, since the feverish Heat still created great uneasiness, both to the Physician and those who were about her, and the Patient had had no Stools since the Eruption of the Pocks, her Pulse decreasing, and her Tongue dry and growing Black, I ordered a Clyster of Ol. Lini, Syr. de Spin. Cerv. & Decoct,

Decoct. Com. pro. Clyst. to be injected. This producing two or three Stools in a short Time, a very great Quantity of fetid and purulent Matter was discharged from the Intestines. From that Time her hard Pulse became softer, her parched Tongue grew moist; and lastly, her feverish Heat was much abated. She still continued, I confess, feverish, but without any great Heat, for which Reason I did not set aside the Use, as I said before, of mild Alexipharmicks, two or three times a Day, nor the paregorick Draught at Night. But on the thirteenth Day, because the Fever still remained, and plainly threatened some Danger, I prescribed (as I remember) the following Cathartick.

℞ Man. opt. ʒi. dissolve in Aq. Lact. Alex.
 ʒiii. Colaturæ adde Pulp. Cassiæ ʒii. Aq.
 Pæon. Comp. ʒss. M.

Which gave her three or four gentle Stools: after that, her Fever daily decreasing, in a short Time totally vanished, and after three or four purging Potions, exhibited at proper Intervals, the Patient perfectly recovered.

I will now give You a very short Account of the Case of a Youth. Being bred in the Country, he came to this City with a Design, perhaps, to visit his Friends. After some Days he was seized with a very malignant Kind of Small-Pox; being called to him on the fifth Day, I prescribed Alexipharmicks, and ordered Blisters to be applied. On the eleventh I advised a Suppository to loosen the Belly, which
 had

had been bound up thro' the whole Course of the Disease; on the next Day a Clyster was injected. But neither was he freed from the Fever, or the other Symptoms, which were outrageous: for the Heat was extremely intense; attended with a Difficulty of Breathing; and a Delirium coming on at times. Judging, therefore, that all our Hopes were to be founded on Evacuants, on the thirteenth Day I ordered a gentle Purge: which being a second time repeated, and the Patient delivered out of various, and those greatly dangerous, Streights, was at last perfectly cured. And indeed this Method of Cure (which is founded chiefly upon Catharticks) as I have tried it in abundance of Patients, so have I experienced it to have very rarely failed.

I will not give You any further Trouble. Candidly therefore accept of my Compliance, as due to your Friendship, to your Merit, and lastly to your Requests: For You may always depend, Sir, upon my Service, if there should be any thing wherein I can possibly gratify You.

June 30.
1710.

Yours,

H. LEVETT,

YOU desire, Sir, that I would deliver to You in Writing, my Opinion of the Use of Bleeding and Purging in the confluent Small-Pox, after a full Eruption of the Pustules: I shall endeavour therefore to answer your Request, if not in the most elegant, yet in the best manner I can.

In the confluent Small-Pox, as long as the Swelling of the Face and Inflammation remain, and the Ptyalism proceeds regularly, I think we ought wholly to abstain from Bleeding and Purging (after the same manner as in the ripening of a Boil.) Namely, lest those Evacuations should interrupt the separation of the morbid Matter from the Mass of Blood, and the discharging it by the Pustules, as by so many Phlegmons, which is the only thing that Nature at present endeavours. For it is the Duty of the Physician to assist, and not obstruct Nature.

Farther, in the Progress of the Distemper, if, when the Face begins to subside, and the Ptyalism to decrease (which happens on the ninth, or tenth, or, at least, on the eleventh Day) if, at this Time, I say, the Hands are Swelled as they ought to be, and no ill Symptoms appear, neither Bleeding or Purging is, in my Opinion, yet in the least indicated; but the whole Business is rightly committed to Nature. Yet, in this stage of the Disease, I every Day order a Clyster

Clyster to be injected, with a Design to throw off the Faces from the Bowels, and abate the violence of the Fever.

However, the Face subsiding on the aforesaid critical Days, as often (which too frequently happens) as the Pustules of the Body are not turgid with digested Pus, nor the Hands swelled; whence (namely, from the morbid Matter remaining in the Mass of Blood, and corrupting it) arises a burning Fever; a short and quick Respiration ensues, a restlessness of the Body, and an obstinate Watching, not to be overcome by Narcoticks; as often indeed as the Patient is troubled with these dreadful Symptoms, it is incumbent upon the Physician to draw off the peccant Humours by Bleeding and gentle Purges, and to relieve the Patient by all possible means.

Lastly, in the confluent Small-Pox, tho' the Face and Hands, and the Pustules of the Body, should have been duly Swelled, as to Measure and Time, and the Spittle have flowed very copiously for a proper Time; if yet, the Spitting ceasing, and the aforesaid Parts now subsiding, the Fever should however (which, in this Species of the Disease, generally happens) perpetually remain very violent, and the Symptoms, arising from it (namely, a difficulty of Breathing, Watchings, Anxieties, with a pale and thin Urine) should affect the Patient without intermission; in this Case, the Physician is under a necessity of diminishing the Quantity of Blood by opening a Vein, (namely, that the o-

ther

ther part may flow more freely thro' the Vessels) and to discharge the morbid Mater (which can no longer pass off the Pustules, which are now indurated and crusted over) by Purges frequently repeated. For these Evacuations being omitted, it always happens, that either the aforesaid Symptoms are daily encreased, and prove fatal between the twelfth and twenty fourth Day; or the putrid Humour is extravasated in the Lungs, and corrupts their Vesicles, whereby the Patient leads a miserable Life for a little while, and in a short Time expires tabid.

A difficulty of Breathing, at the coming on of the Crisis (than which, this Disease has not a more dreadful Omen) is happily and solely relieved by Bleeding; which, unless it be performed immediately, when this Symptom is urgent, any farther deliberation is prevented by a suddenly approaching Fate.

But tho' Bleeding does relieve a difficulty of Breathing, yet it not only not restrains the bloody Urine, as often as it seizes the Patient in this Distemper, but encreases it, and hastens on Death, already at the Doors. However I have removed this dire forerunner of impending Fate, (by giving Camphire twice in a Day, and a large Quantity of Acids) and relieved the dying Patient for a Time: but, to confess the Truth, I have never observed any one Person, affected with the Small-Pox, who made bloody Urine, survive the sixteenth Day from the Eruption.

Neither

Neither am I deterred from Bleeding, as often as a difficult Respiration indicates it by a low and small Pulse. For I have oftentimes observed, that upon the Evacuation of the Blood, the Artery has vibrated more strongly: whence it is plain that the obscurity of the Pulse was not owing to a Decay of the Strength, but to the Load of offending Humours. However, in such dangerous Circumstances, it is better to try an uncertain Remedy, than none at all.

I have observed that some Physicians violently condemn Bleeding in the Small-Pox: for these Gentlemen suppose the Essence of this Disease, to consist in a certain Malignity, lying about the Heart; and imagine it to be the Duty of the Physician, to drive this Malignity to the extream Parts, by the help of the hotter Alexipharmicks, and therefore blame Purging, as being a means to draw the Infection from the Circumference (as they phrase it) to the Center. But this Hypothesis is built upon a fallacious Foundation. For, the Disease, of which we are treating, is of the inflammatory Kind; therefore no one can Cure it skilfully, but he who checks the Ebullition of the Blood, and by that means promotes the separation of the putrid Matter, and its expulsion by the Pustules. For while the Fever rages, and the Blood is agitated with too quick and turbid a Motion, Nature cannot separate the morbid Particles, and protrude them thro' the Habit of the Body, which cannot be done but gradually and slowly.

But

But as often as Nature is not able to throw off the whole Load, by the Pustules, upon the account of the vast Quantity of morbid Matter; it is Lawful, nay, it is the Duty of the Physician to assist the Patient, and to bring off the morbid Humour by Art, which Nature has not Strength enough to eject. But Purging is pointed out even by Nature herself, as an Evacuation the best adapted to answer this Indication. For in the confluent Small-Pox, because the Discharge of the putrid Humour, does not proceed so happily by the low and more depressed Pustules of this Species, as in the larger ones of the discreet Kind; therefore Nature hath providently substituted a Ptyalism, which may compensate the defect of the Discharge by the Pustules. But in tender Infants (which know not how to Spit) a Diarrhœa supplies the Place of the Ptyalism, which constantly attends this Distemper, as if it was as necessary to the preservation of Life in these, as a Spitting, or elevation of the Pustules in Adults. Therefore, whoever checks these Stools, by an unseasonable application of Astringents, certainly destroys his Infant Patient.

Since then in Children, labouring under this Distemper, Nature herself designedly carries off by Stool that part of the morbid Matter, which she is not able wholly to Discharge by the Pustules: without doubt the Physician attempts nothing which is absurd, who, treading in Nature's Steps, endeavours also in Adults to carry downwards, with a Purge, that peccant Humour

Humour, which cannot be thrown off by the Habit of the Body.

From what has been said it is plain, that in the confluent Small-Pox, after an imperfect Crisis, Bleeding and Purging are for the most part requisite toward the Patient's Recovery. This Practice is indeed pointed out by Reason, and confirmed by Experience: for I have known many, by this Method, delivered even from the Jaws of Death.

Thus have You, Sir, my Sentiments concerning your Requests, and tho' with little Ornament, yet with great Fidelity are they delivered; for many Years have I carefully adapted my Practice to this Opinion, neither have I observed any thing hitherto, from the Event, which should lead me to alter either my Mind or Method.

I am,

Sept. 8.
1716.

Sir, &c.

SALUSBURY CADE:



DEAR SIR,

AT length I perform my Promise, and send You in Writing, according to your desire, that Method which I observe in the Cure of the Small-Pox, together with some Examples, which illustrate and also confirm it.

Our

Our Discourse, as I remember, was about the Disease, when it is at the highest, and in what manner the Patient is at that Time to be managed; I said that I had for several Years experienced it to be very serviceable, in most Cases, at least, to loosen the Belly: I shall now, in a few Words, explain to You, with what Design, and also with what Caution, I at first did it.

Our Physicians are generally so solicitous about the Pustules, that they apprehend almost every Evacuation to be dangerous, lest it should interrupt the Concoction of the corrupted Matter, or hinder its Propulsion outwards.

Sydenham places all Hopes in the Swelling of the Face and Hands; when, nevertheless, we daily see Persons die, whose Skin is extremely Swelled; neither, according to his own Confession, in a great many Cases, can that salutary Tumor be promoted by any Art.

Morton, while he is wholly engaged in marshalling the animal Spirits against a morbid Venom, so assiduously encounters the deleterious Enemy with the hottest Alexipharmicks as his auxiliary Forces, that he raises fresh Tumults in the Blood, and kindles that Fever which he ought to have restrained; hence those very Cases he has produced, manifestly show, that most of the Patients, which he had the Care of, either perished by being burnt up, or, at least, escaped so as by Fire.

To me this matter appears to be thus; in that Kind, which is by Sydenham called the

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regular

regular Confluent, when in the decline of the Distemper, the Face has subsided, a putrid Fever is brought on by that corrupted Matter, which is either not yet converted into Pus, or thrown back from the Pustules into the Blood; which manifests itself by an Heat, Restlessness, and the like Symptoms; and unless it be remedied, usually carries off the Patient within two or three Days; sometimes, indeed, it is protracted for several Days.

But how various soever the Symptoms may prove, yet it is common to them all, to require some kind of Evacuation: For the most part the Patient grows Hot on the ninth or tenth Day from the first eruption of the Pustules, with a dry Tongue, very strong Pulse, and a difficulty of Breathing; in this Case, a Clyster being injected about Evening, to loosen the Belly, on the next Day I order a gentle purging Potion, and in the Evening, if needful, a narcotick Draught.

In this kind of Distemper, the Hands and Feet swell: but so far is Purging from checking or repressing it, that I have always observed it to proceed more happily after it.

But it often happens, especially in the worst kind of this Disease, that the Patient is feverish, with a small and languid Pulse, without any remarkable Swelling of the Hands; and the Strength being greatly decayed, he is rather benumbed, than parched with Heat.

In this Disorder, Blisters are to be applied to the Arms and Legs; nor yet must we abstain
from

from all manner of Purgings; however, it ought to be extremely mild, and suited to the Strength of the Patient, and repeated by Intervals; for a Solution of the Belly is so much the more necessary, when the Parts are not Swelled, because, in most of these Cases, a great Part of the Sanies, which is in the Pustules, is not converted into Pus.

This ought to be universally observed, that a greater regard be had to the Strength of the Patient, than to the Pustules: the Propulsion of the morbid Matter, which ought to be made by the Skin, is now entirely finished; the Humour therefore, which threatens any Danger, ought to be carried off by other Passages. The salivary Canals now lay aside their Office, and that Liquor, which flowed thro' them almost from the beginning of the Distemper, now grows viscid, and is difficultly spit out. The Discharge of Urine, if it hath perhaps been large and easy for some Days, is, however, very often, at this time, voided with difficulty, and in lesser Quantities than usual. The intestinal Glands therefore remain to be purged, which are so much the more adapted to derive the corrupt Humours from the Blood, as they naturally expel grosser Humours.

But I should have observed, that not only at this Time, but also on any Day of the Distemper, Blood ought immediately to be taken away, if the Patient should be seized with a difficulty of Breathing; if a Phrensy should come on, or there should be any other signs of too great a feverish Heat.

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From

From innumerable Instances, which I am furnished with by daily Experience, I shall only select a few, that I may show how this Practice may be accommodated to a variety of the most difficult Cases.

A Youth about sixteen Years old, had his Head and Hands greatly Swelled on the ninth Day of his Illness; he was attacked also by a Fever, with a great Heat about the Præcordia, a difficulty of Breathing, and Delirium. Immediately 3xvi. of Blood were taken from the Arm, and I prescribed Pil. Ruffi 3fs. and ten Hours after, since he had had no Stool, Elect. Lenitiv. 3vi. having been much purged, he took an anodine Draught; by this the Fever was so much abated, and the Symptoms alleviated, that he in a short time recovered beyond expectation, altho' he had been so miserably afflicted with this Distemper, that, the Tunica Cornea in both Eyes, being vitiated by the Pustules, he was deprived of his Sight, and lost the greatest Comfort of Life.

In a Youth or two more, afflicted much in the same manner, I have happily experienced, that we ought not in the least to abstain from this Medicine, altho' (which often happens) frequent Exanthemata should arise in the Intervals of the Pustules, and terrify the Standers by with the Notion of a Malignity; for these do not solve the Fever, but denote the Quantity and Lentor of the morbid Matter; whereby it becomes the more necessary, at due Intervals, several times to loosen the Belly.

In a Girl of five Years of Age, there appeared among the Pustules, from the first Days of her being taken Ill, here and there purple and livid Spots; and on the ninth Day her Hands swelled; on the tenth Day the Belly was moved by taking of Lenitive Electuary; the Day after her Forehead, which had been cover'd over as it were with a white Bladder, became of a livid Colour, this I ordered to be fomented with warm Spirit of Wine, she slept every Night with the help of a narcotick Medicine; on the fourteenth Day, the Swelling of the Hands beginning now to diminish, she was again purged; as also on the sixteenth Day; and now that black Crust, which had defiled her Face, began to divide, and tho' it broke off slowly, it promised, however, certain Hopes of a Recovery.

It happens sometimes, but rarely, that towards the End of the Illness, that the Disease should as it were bud forth again, and fresh Pustules arise under the succeeding with which the Skin is covered over; whereby, according to the Quantity of the Humour, the Distemper is protracted even beyond the twentieth Day: this I observed lately in a noble Lady forty Years Old of a gross Habit of Body, in whom there was Matter sufficient to raise the Pocks, even the third time; by this means there was occasioned a continued Ulceration over all her Limbs, with Crusts succeeding one another even to the twenty eighth Day, so that from her lying so long ill, the Ulcers in her Loins show'd some dan-

ger of a Gangrene: on the twelfth Day she was Purged with a gentle Potion: on the fifteenth the Swelling of the Hands, which had continued to this Day, subsiding, I found it necessary to Purge her again; and she repeated her Purging every three or four Days till the Distemper was entirely gone off, her ulcerated Body being at last perfectly Cured, after a long Illness.

In very calamitous Cases Nature herself sometimes removes all doubt about Purging, while she throws the noxious Matter upon the lower Parts, and continues for some Days a Flux of the Belly; when this happens, the Belly ought to be one while bound another loosened, so, that the Strength may not be wasted by too many Stools. By this Method was a most noble Youth, eighteen Years Old, very lately Cured. On the sixth Day his Face, without any Swelling, resembled Parchment; there were no signs of any Suppuration; wherefore Blisters were applied to his Limbs, which I observed to draw off more Humour than ordinary. On the ninth Day, his Hands being hardly any where swelled, a Diarrhæa came on; this by the frequent taking of Confect. Fracastorii and Rhubarb was so checked, that the Patient had, however, at least three or four Stools daily; on the fourteenth, the Membrane of the Face being broke, the Skin appeared underneath corroded by a thin Sanies, the Scales not falling off entirely before the twentieth Day; the Belly however was kept open all that while, in the manner just mentioned.

And

And indeed, that I may conclude, I hardly ever saw any one seized violently with this Distemper escape, who was not restored at the decline of the Fever, either by a plentiful discharge of Urine, or a Flux of the Belly. To say nothing of Infants, who are generally freed from any danger, by having the Body open thro' the whole Course of the Distemper.

This, learned Sir, is what I had to communicate to you; I desire you would make such an use of it, that while you accurately weigh this Reasoning of ours, you may discern what Influence it may have even in other Fevers sometimes, which are but slowly and difficultly solved. Indeed, this Method of Cure has succeeded so happily with me, that I think it is for the Interest of Mankind it should be made publick. But of this judge you, as you please; it is enough for me to have complied with your Request, and given a proof herein what Influence your Commands have upon me,

I am,

Sept. 1. 1716.

Dear Sir, &c.

RICHARD MEAD.

H 4

I will

I will not refuse the Reader a Case which the Learned Dr. *Gibbons* communicated to me. For it is a very rare one. He, when he lived at *Oxford*, was sent for to visit a certain Patient, who had then laboured under the *Small-Pox* for nine Days. They were greatly crowded, depressed, and confluent; the Face was every where covered over with them in such a manner, as plainly to resemble an Honey-comb. A violent and continued Fever, so that the Patient seemed almost ready to expire. Therefore since this experienced Practitioner perceived that nothing more could be thrown off by the cuticular Passages, he resolved to attempt some other way, whereby he might relieve Nature. He therefore prescribed an *Opiate* that Night; on the next Morning, namely, the *tenth* Day, a gentle *Purge*, which answered very well. The *Opiate* was repeated, and on the *eleventh* Day also the *Cathartick*: on the *twelfth* a *Purge* was ordered again, so much indeed to the Patient's advantage, that the Fever, altho' not wholly gone off, was yet greatly abated. Therefore since there was abundance of Blood, and the strength seemed sufficient, on the *thirteenth* Day he opened a Vein: on the *fourteenth* and *fifteenth* he very judiciously tried the same Experiment, which was attended with remarkable success. For by making these *Evacuations* for *six* Days continually, the Patient was perfectly freed from his Distemper.

To the Celebrated

Dr. RICHARD MEAD.

GIVE me leave, Sir, to entreat not only the obligation of a Letter from you, but also to return it to you again: for your Permission to Publish what you have Writ concerning the Small-Pox, deserves great thanks as well upon my account, as that of all my Readers, who, being moved by the weight both of your Reasoning, and also your Authority, will easily, I perceive, come into your Opinion.

For, with regard to the Design of moving the Belly, you have clearly explained, how very aptly it agrees with the Motions of Nature; who oftentimes attempts this Method of removing the Distemper herself, for the most part very commodiously bears it when attempted by Art. For as there is scarce any so weakned by the Distemper, as not to be able to bear this Purging, especially when it is very gentle; so also is it plain from Experience, that the strength is rather recruited than diminished by it, if it be but moderate. Of which we had a surprising Instance in a Youth about eleven Years Old, who was delivered from extreme danger by the joint advice of us both: which because it contains in it something very uncommon, you will give me leave, to recollect in a few Words.

In this Lad the Pustules were diffused over the whole Body in clusters: the order of Nature being so little preserved, that when they only cohered in the Face, about the Limbs they in many Places ran together. The Skin dry, and rigid like Scales. When the Eruption was over, the Fever, which very rarely happens, was nothing at all abated. In the Progress of the Distemper, not the least Spitting: hardly any marks of a Pus: however most of the Bladders were filled with an humour so very thin and acrimonious, that when they were at last broke, they corroded the Skin, as if Oil of Vitriol had been poured upon it. Wherefore there was a necessity of covering the Limbs all over with a Cerate. On the sixth Day he had a continual desire of making Water, which lasted four Days. The Urine was in the mean time voided, but in extreme small Quantities. On the eighth, in the Interstices of the Pocks, there appeared a new kind of Pustules, not unlike the Seeds of Millet. And, indeed, when these come upon the Small-Pox, as also the difficulty of making Water, they are commonly esteemed exceeding ill Signs. The Face was not in the least swelled, and the Fever continually remained, the Pulse both quick, and, also, something languid. He had no Sleep the two preceeding Nights; so that at times he rambled in his Talk. By the application of a Blister he was something more composed. On the ninth Day, he had three Stools. Therefore since there was no supuration of the Pustules, and nothing more could be

be brought off from the Blood by the Skin, judging therefore that it was our duty to follow the guidance of Nature, we ordered him to be Purged in the following manner. Namely, In the Evening, we prescribed Rhubarb $\mathfrak{z}i$. which on the tenth moved him four times. The same Medicine being repeated again, on the eleventh he had five Stools; on the twelfth three; on the thirteenth, with taking Rhubarb $3fs.$ in the Morning, he had five Stools; on the fourteenth two. He passed the fifteenth and sixteenth Days with very great uneasiness and watchings. For the Fever, which had continued ever since the first attack of the Distemper, was not yet abated. The Pulse, however was something stronger. On the seventeenth Day, the lower part of his Heel was so affected with a Sphacelus, that by thrusting in a Probe no sensation could be excited. It pervading even as far as the Periosteum, the Bone itself did but just escape. But neither did this grievous Accident deter us from our Intention; for tho', if we regard the Mortification, no Method of Cure may seem more improper, than Purging: however, since the restoring of his Strength depended wholly upon his being gently purged, we saw no reason, notwithstanding the coming on of the Sphacelus, to desist from this kind of Relief. Therefore, $xii.$ gr. of Rhubarb being given about Night, on the eighteenth he had two Stools. On the nineteenth the Fever much abated. Wherefore, the Rhubarb being repeated to a $\mathfrak{z}i$. on the twentieth it produced five Stools. The corrupted
and

and dead Part began to separate from the sound Flesh, which was now duly inflamed, and distilled a small Quantity of Pus; neither did the Sphacelus creep any farther. On the twenty third he had three consistent and solid Stools. Nevertheless the Fever was not yet wholly gone off. Therefore on the twenty fifth, we prescribed Decoct. Sen. Gereon. 3 ii. Mannæ 3ss. which gave him six Stools. From this Time the Fever entirely vanished; and now we began to entertain some hopes that the Youth would certainly recover, whom we suspected of being in danger of falling into a Consumption.

You see, Sir, how freely I use your Patience, in relating those things, with which You are so perfectly acquainted: which yet You will the easier bear from me, since, I endeavour to make others also understand them. The Species of the Small-Pox are found indeed to be exceeding various and ununiform; which Dissimilitude, altho' it is so very great, has not hitherto been diligently enough observed by Authors. However, in all the different Kinds, altho' the Pustules are drying off, if the Fever should still continue, present Relief may be had from Evacuants: for that kind of Evacuation, which is made by Stools, not only delivers the Patients oftentimes from the danger of Death, about the ninth or the eleventh Day, but averts that train of Evils, which generally succeed the Small-Pox, more powerfully than any other Medicine.

I suspect

I suspect it too frequently happens, that this Disease is reckoned Incurable, when, yet (at least if it hath continued a long Time) it might very commodiously be cured: but surely it does not become the Physician, entirely to cast away all Hopes, but to try all the means of Art, which have either been confirmed by Experience, or suggested by Reason; especially when the Disease itself affords an opportunity of making a trial: for it usually happens, that it does not destroy the Patients by any sudden Shock, but holds them for many Days, to the twentieth, to the thirtieth, and sometimes also even to the fourtieth, so that at last they wast away plainly Hectick.

Some Persons are very scrupulous about Purging before the Fever is wholly gone off: nay, when the Fever is removed, they will not prescribe Purging Medicines till many Days after. With what design this is done, for my Part, I cannot understand: for if there be no Fever, without doubt the Body ought to be purged the very first opportunity; if there be one, there is hardly any other means of attaining a Cure. The same Gentlemen, when the Fever has been outrageously violent, place their only Hopes almost, either in a very plentiful flux of Urine, or the continuance of the Swelling of the Limbs, or the Ptyalism: but why may we not also bring away this febrile Matter by the Intestinal Passages? but I will not enter into a Controversy with these Gentlemen; lest I should be under a Necessity, some Time or other, of disputing with
those

those Persons, who contend that the Small-Pox may either be prevented by Art, or also conveyed by Inoculation.

You know very well, with how little Advantage, or rather, with how great Danger, Diaphoreticks, Alexipharmicks, Cortex Peru, &c. upon which those Persons solely depend, are thrown in during this Violence of the Distemper: and it is also perfectly known to You, that if Purging be rightly instituted, hardly any other Cardiack Medicines are required by Nature, than such as are made from Opium.

Go on, excellent Sir, in your usual Manner, both to cultivate the Knowledge of our Art by your Learning, and also to maintain its Dignity by the Reputation of your Name.

I am,

Sir, &c.

Nov. 26. 1716.

JOHN FREIND.

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*There is also another kind of Distemper, and that a very dangerous one, in which also, when the Fever is not in the least abated, purging Remedies so wonderfully succeed, that sometimes it is impossible to be cured without the*

the use of them. This Disease is, an *Erysipelas* on the Head; and has been amply treated of by many Writers, especially *Hieronymus Fabricius*; however, I require of all of them something more explicate and distinct, with regard to the giving of purging Medicines in the height of the Fever. In which matter they propose every thing so slowly and doubtfully, that for the most part they not only distrust, but also differ from themselves: some approve not of *purging Medicines unless the Body abounds with Bile, and the Disorder be violent*; and contend that more use ought to be made of *cooling Medicines, than Evacuants*<sup>a</sup>; besides, however they may agree about cooling and evacuating, they imagine greater Relief to be had from *Sweating*<sup>b</sup> than *Purging*: others, altho' they confess that *purging Medicines* may be aptly administred, yet, when the Fever is so very intense, as to bring on a *Delirium and Phrensy*<sup>c</sup>, they rather think we ought to make use of *Medicines which resist the Malignity*<sup>d</sup>; and that we ought not to *Purge* before the feverish Heat is extinguished; at least, if any *Purges* are prescribed, they affirm, that we must absolutely avoid any thing of *Scammony*, upon the account of the Fever<sup>e</sup>. *Sennertus* tells us, that this Distemper is most familiar to the *Germans*, and that therefore its Cure may be safer learnt from the Experience and

<sup>a</sup> *Tagault. Instit. Chirurg. Lib. 1. 8.*  
<sup>b</sup> *Paracelsus de Tumor. Lib. 6. 15.*

<sup>c</sup> *H. Fabric. Chir. Part. 2. Lib. 1. 9.*

<sup>d</sup> *Wiseman.*

<sup>e</sup> *Fallop. Tumor. P. N. Cap. 12.*



*and Observation of the Germans, than from the Writers of other Nations* <sup>a</sup>: but he, altho' himself a *German*, borrows most of what he says about an *Erysipelas* from *Fabricius* an *Italian*: with this difference, however, that he has not said one Word about *Purging*, which the other sometimes prescribed, when the Distemper was at a stand. In the last place, *Etmuller*, who was also a *German*, tells us, when an *Erysipelas* has seized the Head, that the Cure ought to consist entirely of *internal Sudorifick and Cephalick Medicines*, and that any *Purging* whatever ought very carefully to be avoided <sup>b</sup>. Thus, generally in the utmost Danger of the Distemper, Authors either give no Directions at all, or such as are full of Doubt and Hesitation: as if, when the Case is most hazardous, the Physician ought to be more timorous, than when there is no suspicion of Danger.

But to comprehend in a few words, what I proposed; I believe myself so fully convinced by Experience, that I may affirm in an *Erysipelas of the Head*, if at any time the Brain being seized, a Coma, Delirium, and distension of the Nerves should arise, that there is either no hopes at all of a Recovery, or that Purging will be extremely serviceable: neither in these streights must we wait, which we experience also in the *Small-Pox*, till either the Fever is abated, or the Tumor plainly subsided. For to oppose the Fever with *Cardiack*

<sup>a</sup> *Febr. Lib. 2. 16.*

<sup>b</sup> *Medic. Chirurg.*

*diack and cooling Remedies*, to apply *topical Medicines*, what else is it, than to trifle, till the Patient dies in the midst of his Cure? But if *Purging* is able to remove the Distemper already brought to a conclusion, without doubt if it be earlier prescribed, it would prevent its spreading so far. To illustrate this, therefore by an Example, I will subjoin one, which happen'd very lately, and which is very uncommon.

In a young Lady, the Face being seized with an *Erysipelas* swelled: a slight Horror and Fever, as is customary in that Distemper, preceded.

On the next Day, not only the Face, but about the Ears and Neck, the Skin was swelled with a redness. An high Fever. At times she was something delirious. A *Blister* was applied to the Neck.

3. The Swelling proceeded so as to encrease to a great bulk. Which since it was intensely red, might seem to be of that kind of *Erysipelas*, which *Fabricius*, following *Galen*, terms *Pblegmonodes*, for a genuine one according to that Author<sup>a</sup>, is hardly ever found in the Face. About Night she became altogether delirious. Mr. *Burges*, an Apothecary had applied *Blisters* to the Arms, and ordered the use of *Clysters*, which came away without any benefit.

4. Every thing was exasperated. When I first visited her in the Afternoon, her Delirium and Fever were violent: she talked a great deal,

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but

but very incoherently. Sometimes she lay in a manner Lethargick, distensions of the Nerves arising now and then chiefly about the Hands and Shoulders. The Tumor much the same, except that it had lost some small matter of its redness. The Pulse not so strong as quick. Therefore I immediately ordered *Blisters* to be applied to both sides of the Neck; of which, indeed, I much wonder that there is not one Word to be found in those Authors abovementioned: especially since that kind of Remedy may be very beneficial, if in any other, in this Species of Diseases; but because she seemed to be near her end, neither did I conjecture that this might be so serviceable, unless we also called in some other help to remove the matter. This *Purge* was ordered at three in the Afternoon.

R. *Decoct. Sen. Gereon.* 3 iii.

*Tinct. Sacra cum Vin. alb. pp.* 3 i.

*Syr. de Rhamno Cathart.* 3 vi. M.

Which produced no Stool at all. Therefore about Midnight she took *Tinct. Sacra.* 3 ii.

5. Every thing the same, except that she lay quieter, or rather stupid with the Violence of the Distemper. The Belly still bound. Wherefore about Noon another *Cathartick* was exhibited, which was as follows.

R. *Tinct. Sacra.* 3 ii.

*Syr. de Rhamno Cathart.* 3 i. M.

But even with this, indeed, she had no Stool. In the Evening *Blisters* were applied to both Arms.



6. All things in the same state; only the Heat seemed to be abated. Early in the Morning the Purge was repeated, which was now last prescribed. By which the Belly was but gently moved, however so as to bring some relief. A sharp Clyster was in like manner injected in vain. Therefore I advised Purges to be taken in this order, because I acquainted them that we must neither desist from this Method of Cure, until it answered; and that if it did not answer, she could not possibly be relieved any other way. Therefore though it had been *four* times attempted in vain, yet I was firmly persuaded that I must persist in it. In this state of the Disease the Case being much the same as in the *Small Pox*: for the febrile Matter was neither dissipated by the *Tumor*, neither can it be averted in any other Manner, unless a Passage be opened for it through the *intestinal Glands*.

7. At length, things taking a turn for the worse, she made use of the following Medicine.

℞. *Pil. e duobus gr. xv. in Aq. Theriacal.*  
*3i. solut. Syr. de Rhamno Cathartico*  
*3fs. M.*

This producing *five* Stools, she came to herself: but could not remember any thing that had passed for these last six Days. The Tumor subsided, and the Fever so much abated, that the same *Cathartick* being twice repeated, she entirely recovered her former State of Health.

This kind of Medicine, indeed, of which not a small Part consisted of *Scammony*, which

is rejected by most as plainly pernicious in this Distemper, delivered the Patient out of the greatest Danger. For which Reason the physical Determinations even of the most celebrated Authors, should not be very easily received, unless confirmed by repeated Experience.

*Of the intestinal Discharge.*

**B**Ecause much has been said concerning *Purging*, and we have laid a great stress upon it; it will not be improper to enquire narrowly into the whole Manner of Purging. Which will appear the less amiss in this Place, since some too easily condemn this kind of Evacuation, others pretend greatly to prefer before it that which is made by the *urinary* Passages, or even that which is produced by a *Clyster*.

*Peyerus*, who first discovered the intestinal *Glands*, attributes this Office to them; to supply a proper Humour for diluting and elaborating the Chyle. From this Fountain he imagines it to proceed, that when a *Purge* is given, so great a load of Stools descends; which abundance, however of Humours, some deny to be in the least secreted either by the Law of Nature, or the Assistance of Art: those who doubt of a natural Secretion seem to have done it chiefly upon this account, because they did not at all understand, how a *Cathartick* could derive so great a load of Excrements almost  
from

from this single Source. Which Doubt may very easily be removed, if we bring this thing to a Calculation.

We learn from the Laws of *Statics*, laid down by *Sanctorius*, that the Evacuation of the Belly, if compared with that of the Skin is as one to ten: therefore it will be in the space of twenty four Hours as 3 iv. 3 vi. 3 i. gr. iv. to 3 xlviii; and in the space of one Hour as 3 iv. gr. 16. to 3 xlviii. In the colder Regions, upon the account of a smaller Perspiration, this Discharge from the Belly rises perhaps something higher: which is confounded by those who dispute of these things, with that which is made by the Glands: but how widely these differ from one another, may be thoroughly discerned by any diligent observer. It is plain that the Fabrick of the Skin and of the Intestines is the same, and that both of them are covered with Glands: which though they are less visible to the naked Eye, yet they may very easily be seen by the help of a Microscope. And that this discharge may be the better perform'd by the Intestines, Nature has been wisely provident in dispersing over their Coats Blood-Vessels in great number. The Skin, at a moderate Computation, contains about 2640. square Inches. The Intestines, since they are near 30 Foot long. and their circumference at a medium about four Inches, form a Cylinder, which contains 1440 square Inches. So that the intestinal Superficies, if it be compared with the Cuticular, is in a proportion greater



than an half. But because the Glands are not found to be so crowded on the Intestines as on the Skin, let us suppose the Superficies, from which any Humour is discharged to be in the same proportion as one to four. In the space therefore of one Hour, if the Skin throws forth  $\text{xxxlviii}$ . there will flow from the Intestines  $\text{xxij}$ . Neither will any one readily deny that the Intestines discharge this quantity of Lymph, who considers, how much larger the Mouths of the excretory Vessels are in these, than in the Skin; and this is evident from the Glands themselves, which exceed much in their magnitude.

Upon this consideration, therefore, we find that a much greater quantity both may, and is wont to be supplied from these Glands, than what is thrown forth by the natural Discharge. But since the remains of the Aliment make up a great part of the Discharges, nay the greatest, since these are solid, it may easily be shewn, that the Matter derived from the Glands of the Intestines, is so far from being totally cast forth, that it passes back again with the Chyle into the *lacteal* Vessels, and into the Circuit of the Blood: plainly after the same manner as the Lymph usually returns from the Parts of the lower Belly. Therefore, as is manifest from Experiment, whenever there is not a supply of Chyle, to be derived into the *lacteal* Vessels, they are very full of this Lymph secreted from the Glands,

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This Distinction, since it hath been but little attended to, has led those Persons into an Error, who in their Discourses about the most commodious means of Evacuating, suppose, *That the Ratio<sup>a</sup> of the circular Secretion to the Ventral, is greater than the Ratio of an hundred to one.* For upon the exhibition of a *Cathartick*, the Intestines being griped, by a continual Irritation, cast down not only the remains of the Aliment, but all that which is secreted from the Glands. So that upon this account only the Evacuation is rendered *four times* larger by a Purging Medicine, than what happens in a natural State.

*Purges* exert their force chiefly two ways; either as irritating the Coats of the Intestines with a sort of Stimulus, or as accelerating the Circulation of the Blood: those which are very strong produce both effects. The Stimulus, indeed, with which *Purges* are endued, not only casts forth a greater quantity of Lymph from the Glands, but likewise so revels the Humours, that there is less resistance and a freer Passage at the Mouths of the Glands than any where else; hither therefore they flow in a more plentiful manner, or what is the same thing, the celerity of the Blood is encreased in these; much in the same manner as the Skin, when it is eroded with a *Vesicatory*, throws forth a Serum. These *Purges* which insinuate themselves into the Blood, cause it to flow with a greater velocity, both because they

increase its Stimulus, and attenuate and dissolve the cohesion of the Humours. This is sufficiently clear from the Heat which Purges excite; the same too is indicated by the Pulse, which becomes both stronger, fuller and quicker.

What Addition may be made from hence, namely, the increased velocity of the Blood, to the Discharges by Stool, will easily appear from the subsequent reasoning. The largeness of the *mesenterick* Arteries, with which the Intestines are moistned, bears the same Proportion to the Base of the *Aorta* as one to ten.

Since then it is plain from Experiments, that four thousand Ounces of Blood are derived into the *Aorta* every Hour, those Arteries in the same space of Time will carry four hundred Ounces into the Intestines. Besides something is brought hither from one or other of the Branches of the *Celiac*. The natural Excretion which is made from thence by the Glands, does not amount to more than twelve Scruples. If we suppose, for reasoning sake, that the Blood flows with double the Velocity (which that it is so, is demonstrated by the Pulse, upon the Exhibition of a very strong *Catbartick*) the *mesenterick* Arteries will bring eight hundred Ounces every Hour, and the Glands will secrete about twenty four Scruples in the same space of Time.

For any Secretion whatever is to be measured, *ceteris paribus*, by the Rule of the Velocity only. But if the Velocity should be

trebly



trebly encreased, which, upon the account of the Stimulus, at least, at the Mouths of the Glands, may very reasonably be allowed, thirty six Scruples will flow forth. And if the Diameters of the excretory Vessels should be *doubly* enlarged, (which happens no doubt when the *Purge* is something more acrid) the glandular Secretion of the Intestines will amount to one hundred and forty four Scruples, *i.e.* it will exceed the Quantity settled by Nature *twelve times*. So that by this means, in the space of *eight* Hours, while the Purges are executing their Office, forty eight Ounces may be drawn off from these *Glands*.

But while we consider that Evacuation which is made by Purges, we must not pass by the *Bile*. Therefore, if within one Hour, by the sole force of Nature, two Drachms of *Bile* flow into the Intestines, as is shewn by the curious Dr. *James Keil*, a *Cathartick* being exhibited will draw forth six Ounces from the Liver, if, as we said, there be triple the velocity in the course of the Blood, the Diameters of the Vessels being, in the mean time, not in the least dilated. Hence, the Belly being quickned by Art, the Stools are found to be for the most part bilious. But it is to be remarked, that the Bile, the more hastily or plentifully it flows forth, becomes the more diluted. By this means, tho' we do not consider either the remains of the Aliment, or the *pancreatick* Juice, *thivfs.* may be purged off by a *Cathartick*, thro' the intestinal Passages.  
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But the Vessels being likewise enlarged, the efflux of the Humours will be much more copious, to wit, in the duplicate Ratio of the Diameters. Which being thus, it is obvious, how little the same is to be expected from *Clysters*: which commodiously enough purge and carry off the Fæces which load the Belly; but can by no means bring down either the Bile, or reach these Glands, which are situated chiefly in the *Ileum*.

Thus when the Disease is either entirely seated in the Intestines, or there should be a very violent Purging, if the Blood flows swifter than usual, or the Mouths of the Vessels are too much enlarged, this Secretion by the Glands may be carried to a much greater Degree. For Instance, that Disease which we call the *Cholera*: in which it is almost incredible, how great a Quantity of Humours is drawn forth, by that Stimulus, which is occasioned in the Intestines by early Fruits, or any other Crudities whatever. But that the Mouths of the Glands may be distended much more than they are constituted by Nature, is very apparent, not only from a *Symptomatick*, as it is called, but also a *critical* Flux of the Belly: of which this indeed so often throws off that Matter which is cast upon the Fauces and Lungs by the Cold, that it becomes an Auxiliary to the Perspiration. For that Quantity of Humours, which ought to have been eliminated thro' the Skin, seeks a Passage by these Glands: which Evacuation, indeed, when

when it happens, exceeds the natural Flux of this Lymph *ten times*.

By so perpetual a Law of Nature does this Secretion from the Intestines proceed, and so necessary is it found for the duly elaborating the Chyle, that if by chance these Glands should be obstructed, or grow hard, either an incurable Costiveness arises, or the *Celiac* Passion: in which Disease this principally happens, we are taught by the Dissection of dead Bodies.

But when this obstruction of the Glands has remained for any short Time, or any part of them has been so stuffed up with glutinous Humours, that the Lymph, necessary for the subduing and comminuting the Aliment, is not sufficiently supplied, that Species of the *Celiac* disorder comes on, which admits of a Cure; and which we distinguish by a *Chylous Flux*, that, to speak properly, takes its Origin from the obstructed *Lacteals*.

If we should make a stricter enquiry into the use of the Glands and the Lymph, which they eject, we shall come to a thorough Knowledge of the Cause of this Disease: neither do I think there is any clearer Argument to prove how much *Anatomy* contributes, not only to the understanding of Physick, but to the applying of it, than this Knowledge of the *Peyerian* Glands. For whoever looks into the Records of the Antients, will easily perceive how groundlessly, not to say how absurdly, they imagined the *Celiac* Affection to arise;  
*either*



*either because the Temperament was too Cold and Moist, or because the retentive Faculty was debilitated.* But this Cloud is dispelled by *Anatomy*, which by explaining more distinctly the Fabrick of the Intestines, clearly shows that this Distemper is occasioned by this, that the Humour, which is wont to be discharged from the Glands, is, at least, in some measure shut up. Therefore we find those Remedies, which gently irritate the Belly, and deterge the Mouths of the Glands, to be the most efficacious in this Distemper. Thus a more exquisite Knowledge of this Disease, leads us the most direct way towards undertaking a successful Cure: in which, as the Antients were deficient, so they pursued an ill-grounded Method of Cure, as being founded solely upon *Astringents*. For who does not see that they embraced it upon this account, because it suited and favoured the Opinion, which placed the Cause of the Disease in a certain loss of Tone, or weakness of the Intestines? But really, if any one would pursue this Method of Cure, and make use of no other than *Astringent* Medicines, which was the Custom of the *Methodists*, without doubt that Person would not deterge, but obstruct the Glands: so that the Disease would not seem, by this Method of Cure, so much to be removed as confirmed.

But let us now conclude this enquiry; for we have already sufficiently explained, by what artifice of Nature this glandular Secretion

is finally performed, and to what purposes it is subservient: but if what has been said be perfectly understood, we shall easily see into the Reason of what the Lord *Verulam* has very judiciously observed concerning *Purges*. "*We confidently (says he) affirm that Purges<sup>a</sup> repeated and rendered familiar, are far more conducive to Longævity, than Exercise and Sweat. For it is very certain, that not only excrementitious Humours and Vapours are exhaled and cast off by external Sweat and Perspiration; but, together with them also, the good Juices and Spirits, which are not easily repaired. But in Purges, if they have not been very immoderate, it is not so; since they act principally upon the Humours.*" Thus he in his manner of Philosophising. But whoever will apply *anatomical* Reasons to this Affair, will easily perceive, how this Practise of Purging may not only open and absterge the Mouths of the Lacteals, but rid the Glandules of the thick Humours, with which they are oftentimes obstructed: so that they afford a constant supply of Lymph destined to the elaborating the Chyle, from which Nutrition both wholly flows, and Life itself is likewise propagated. By this Method, therefore, of Purging in a good state of Health, is great Care taken, lest the Assistances in Sicknes should be misapplied.

<sup>a</sup> *Hist. Vit. & Mort.* 1613.



## COMMENTARY VIII.

*Of a Profluvium of Urine.*

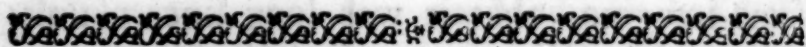
**W**E read of many in *Hippocrates*, who have been delivered from a Fever after a Profluvium of Urine: who, as he has been very full in his Remarks upon Urine, so from this chiefly does he seem to have taken his Indications of Cure. But whether or no he exhibited Diureticks in Fevers, does not plainly appear. For no Medicine has been hitherto found out, which in those Cases so powerfully discharges Urine, that we can hope from it the same Discharge of the febrile Matter, as we experience from Purging. Therefore, if we regard the *Evacuation*, little stress is to be laid upon *Diureticks* in the management of Fevers. The Reason of this is very obvious, to any one who considers the Structure of the Parts; for, however the *renal Arteries* may in a manner equal the *Mesenterick* in Capacity, and receive perhaps a like portion of Blood; yet, since there are much fewer Vessels in the Kidneys than in the Intestines, for the secreting the Humours, therefore the Evacuation both ways will not prove equally large. Besides it is to be remembred, that there is not likewise the same vertue in *Diureticks*, as *Vomits* and *Purges* are endowed with, as to answer perpetually the Physician's Design.



Design. Sometimes, I confess, indeed they occasion a surprizing discharge by Urine; yet that they oftner elude his Hopes, is proved from Experience: which happens too frequently in the Dropsy and difficulty of Urine, in which Diseases chiefly this aid from *Diureticks* is required. So that at present, this branch of Medicine, which relates to the discharging of Urine, is the most deficient of all.

The Custom has sometime prevailed, of giving very large and frequent Potions to Persons who lie ill of *Fevers* and the *Small-Pox*. Which Custom is so far from being Novel, as some imagine, that it was long since plainly delivered by *Hippocrates* himself: for he, that he might deliver a very accurate account of the *Diet* proper in *acute* Disorders, has described various kinds of *Drinks*, particularly *Ptisans*; so that those Persons, who first introduced among us the temperate and diluting *Regimen*, as it is called, gathered it almost wholly from this Book of *Hippocrates*. And without doubt this Method of Cure is of very great Service. For by these thin Drinks the feverish Heat is both abated, and the Mass of Blood so attenuated and comminuted, that it may be carried more freely thro' the Vessels, and if any superfluity remains, it may pass off thro' the Passages of the Skin and Urine. Neither yet, should these Drinks be immediately ranked among *Evacuants*, because they provoke Urine. For they do not occasion this so much by any *Diuretick* Quality, as be-  
cause

cause they are greatly diluted and thrown down in such great Quantities. Thus, tho' there should be a very plentiful discharge of Urine, it may happen, that the Vessels are by no means exhausted, in which the same Quantity of Humours is carried on in a continued Course. Let us content ourselves therefore with that Advantage, which we may receive from these Drinks; namely, that they *dilute*, and not endeavour to affix to them a power of *evacuating*, which Nature hath denied.



## COMMENTARY IX.

*Of those Vescicatories into which the Cantharides enter.*

HAVING already gone through the several Methods of *Evacuation*, which Nature has either attempted, or her most excellent Interpreter *Hippocrates* has brought into Practice, give me leave to add one unknown to that great Man: which, however it may have been of a more modern Invention, yet challenges a superior Rank in the extinguishing of Fevers. No one is ignorant that I mean *Vescicatories*: of which, since the Materials are various, we shall discourse of those only, into which the *Cantharides* enter. For these, as they are very powerful and greatly efficacious,

so they lessen the force of the Distemper in a more expeditious and unexpected manner, than any other *Evacuants* whatever, except opening a Vein.

The *Cantharides* are indeed often recommended by *Hippocrates* as an internal Medicine; but never applied by him towards raising a *Blister*, though, either he, or some one else, seems to have been in some measure sensible of their Vertue, even when applied to the Skin; for whoever wrote the Book of *Superfatation*, orders them, among other Instruments of irritating, to be mixed with a *Pessary*<sup>a</sup>, for the cleansing of the *Uterus*. *Aretæus* first ordered them to be rubbed upon the Skin of the Head, to cause an Exulceration; and tho' we are uncertain when he lived, we may at least reasonably suppose him contemporary, if not older than *Galen*: he therefore advises the use of them in the Cure<sup>b</sup> of an *Epilepsy*, and orders the *Epileptick* Person a Milk Diet for three Days before, lest the *Cantharides* should offend the Bladder.

The same Method of Cure in this Disease, as well as in the *Palsy*, was, according to *Ætius's* Account, persued by *Archigenes*<sup>c</sup>; with whom, as far as we can conjecture, *Aretæus* was of the same Sect as well as Age. Afterwards *Galen* tells us, that Plasters, made with these Flies, may be used successfully against a *Scabies*, and other Disorders of the

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Skin:

<sup>a</sup> De *Superfatat.* 25.

<sup>b</sup> *Curat Diuturn. Morb.* 1. 4.

<sup>c</sup> *Tetrab.* 2. *Serm.* 2. 28. & 30.



Skin: but he, as *le Clerc* has rightly observed, (to whom we are obliged for his accurate Commentaries upon the *Medicine* of the *Antients*) reckons this kind of Remedy, either of little service in most Distempers, or, as is evident from his Writings, seldom tried it, as being full of Danger. Those *Grecians*, who have followed *Galen*, as in almost every other Subject, so in this likewise do they bring nothing new: in like manner, may you also consult the *Arabians* in vain, who, however fruitful they were in compounding of Medicines, in this particular, tread, according to Custom, in the Footsteps of the *Greeks*.

Among the *Latins*, the *Cantharides* seem to have been of no account: for *Celsus*, who deals much in *Sinapisms*, does not, as I remember, mention them, except in detarging the *Papulae*, wherein he follows *Micon*. *Pliny* indeed tells us, that the application of *Cantharides* is of service against the *Lepra* and *Lichenes* <sup>a</sup>, and that they are serviceable also in extracting of Darts <sup>b</sup>: *Scribonius Largus* only celebrates them, being mixed in a *Cerate*, as useful in removing *Stigmata* <sup>c</sup>.

This was the Practise among the *Antients* of applying *Cantharides* to the Skin; and that indeed very rarely, as taking place only in *Cold Humours*, and any *inveterate* Disorder. Nor, after the revival of Learning, was this kind of Medicine for a long while more freely made use of: so that *Fernelius* order'd it only  
in

<sup>a</sup> 29. 4.<sup>b</sup> 30. 13.<sup>c</sup> 231.

in a *Blindness* <sup>a</sup> and a *Dropsy* <sup>b</sup>, and affirms, that it ought to be prudently applied, and with the greatest Art. Holler, who was contemporary with Fernelius, a sound Writer, and one who was well versed in the Writings of the Antients, orders the Powder of *Cantbarides* to be mixed with a *Phænigmus*, for removing a *Lethargy*; tho' Duret, who annexed some Remarks to Holler's Writings, by no means allows the use of *Sinapisms* in a *Lethargy*, as being joined with a *Fever*, which rejects these hot things <sup>c</sup>. But wonderful is that Cure which Holler attempted together with Parey <sup>d</sup>: for they persuaded a noble Lady, whose Face was deformed all over with ardent *Pustules*, and those foul as in an *Elephantiasis*, to have a Blister of *Cantbarides* applied all over her Face. Upon which she was seized with such great Pains, and so violent a *Fever*, that there were hardly any hopes left of her Recovery: but when she was freed from this Danger, by the great skill of these two Persons, the Deformity, which had before seized her Face, vanished for ever. The same Holler, discoursing of *Pyroticks*, says, that by the help of Blisters, which are raised by *Cantbarides*, Persons afflicted with a *Sciatica*, *Gout*, *Hemicranie* and *Head-ach*, have been oftentimes relieved; the Bowels purged, and the Body entirely freed from Filth and Excrements; and lastly, that a thousand old and stubborn Ails have been cured <sup>e</sup>.

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But

<sup>a</sup> Conf. 12.<sup>b</sup> *Ib*id. 34.<sup>c</sup> Edit. 1577. 31.<sup>d</sup> *Paræ. Lib. 20. Cap. 28.*<sup>e</sup> *Institut. Chirurg. 3. 9.*

But I cannot omit observing, that all this commendation, concerning the vertue of *Cantbarides*, is entirely wanting in those *Chirurgical Institutions* of *Holler*, which were first published, with *Tagault's* Writings, in the Year 1540. which Edition was likewise followed by *Gesner* and *Uffenbach* <sup>a</sup>. Whence one may reasonably suspect, that this Medicine began to come into frequent Practice after that Time. Of which, there was then so great and so absurd a suspicion, that *Adolphus Occo*, who flourished about the Year 1560. would not suffer *Cantbarides* to be carried even in a Man's Pocket, because it was proved that one who had thus carried them, had made bloody Urine <sup>b</sup>. But these are not the Fictions of Physicians using their Reason, but such as are in a Dream.

But if we should have recourse to the later Writers, we shall find that many abhorred this kind of Medicine, even in the beginning of the *sixteenth* Century; and that it used to be applied with great fear and hesitation, we may learn both from others, and especially from *Banzer Augustanus*, who affirms, that *Vesicatories* ought not to exceed the breadth of a Crown Peice <sup>c</sup>. Besides, *Etmuller* follows the dimension proposed by *Thalerus*, and recommends it, in the Cure of Diseases, especially Fevers, with so much coldness and caution, that he seems to insinuate this Method of Practice

<sup>a</sup> *Scriptor. Chirurg.*

<sup>b</sup> *Schenck. Lib. 7. Obs. 37.*

<sup>c</sup> *Fabric. Recept. Lib. 2. f. 2. 21.*



dice to have been familiar with the *Italians*, rather than his own Countrymen <sup>a</sup>. And indeed so little was it cultivated by the *Germans*, that in those large Volumes of *Senner-tus*, which are stuffed with such a farrago of Medicines, mention is very rarely made of *Vesicatories*, tho' he tells us he had used them a *thousand* times himself <sup>b</sup>.

Let us see therefore what *Italy* will produce. When the Plague raged cruelly, both at *Padua* and *Venice*, in the Years 1575 and 1576, the Physicians made very diligent enquiry, by what particular means that Evil might either be removed or prevented. The Learned *Mercurialis*, has very accurately described this Plague, and amply explained what Method of Cure ought to have been applied to it; and among the Remedies, which are remarkably serviceable in this Distemper, he commends these kinds of *Vesicatories* as the most excellent <sup>c</sup>. He therefore, as I imagine, first introduced them among the *Italians*; neither indeed ought we to envy him the Praise of it, altho' the same Method had been before recommended, as well by *Marsilius Ficinus* <sup>d</sup>, as *Alexander Benedictus* <sup>e</sup>, in the Cure of Pestilential Carbuncles; and described in the foregoing Age, as he himself ingeniously confesses, by *Jacobus de Partibus*, Physician to the King of *France*, in his Commentaries con-

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cerning

<sup>a</sup> *Comm. in Schröed. de Compos. Med. c.*  
Cap. 26.

<sup>c</sup> *De Peste c. 26.*

<sup>e</sup> *De Pestilent.*

<sup>b</sup> *Lib. 6. p. 8.*

<sup>d</sup> *Epidem Antidot. 15.*

cerning the Plague <sup>a</sup>. Not long after, to wit, in the Year 1590. the Plague broke forth at *Pesaro*, so that the Duke of *Urbino* thought it proper to consult all the Physicians of the School of *Padua*, that this growing Evil might be the more happily prevented. But these disagreeing among themselves about the fitness of the Remedies, especially *Blisters*, *Hercules Saxonia*, that he might defend his own Opinion, published a Disputation concerning *Vesicatories*, as far as they relate to the Cure of *Pestilential Fevers*. Hence there arose such great Contentions concerning this Affair, that it was disputed by the whole Body of Physicians: the adverse Party was headed by *Alexander Massarias*, who contended fiercely against *Blisters*; he was moved by a certain Emulation, both because he could not bear *Saxonia*, as being a younger Man, and also because he was resolved to persist in the Steps of the Antients. But what better could be expected from a prejudiced old Man, who boasted that he had rather err with *Galen*, than think justly with the Moderns? But all Disputes to the contrary were refuted by *Saxonia*, in three Books which he published concerning the use of *Vesicatories*. Wherein he has treated so copiously of this Affair, that the Writers since his Time, plainly follow him, and have hardly added any thing upon this Subject.

From

<sup>a</sup> *Comment. in Avicen. Supra primam quartam.*

From this Time therefore the Custom prevailed, to assign *Cantharides* the first Place among *Vesicatories*: which, tho' they are proved by Experience to be serviceable in many Distempers, especially Fevers; yet, by what power, and in what manner they reach and stir the Humours, has not been hitherto sufficiently explained. What Effects they have upon the Skin, is so obvious to every one, that the Writers of Physick seem to have regarded this only: and stopping, as it were, at the Threshold, whatever benefit accrues from *Vesicatories*, they have been contented to derive from an *Evacuation of the Serum* only. This they imagine to proceed from a *Stimulus*, which is occasioned by the *Vesicants*, and by a *Fusion*, as they love to Talk, of the Humours; so that, since the Skin is pricked as it were with Needles, the *Serum* ouzes forth. It must be confessed indeed, that upon the account of this *Stimulus*, with which the Skin is pierced, the Humours flow thither in greater quantity than usual: neither yet is it to be thought that the *Serum* flows out, the rest of the Blood being confined within, because it is, as they fancy, in a peculiar manner, either *imbibed* <sup>a</sup> or *attracted* <sup>b</sup> by the Particles of the *Cantharides*. For when the Coat of the Vessels is ever so little eroded, the *Serum* runs out only upon the account of its thinness; but the Globules, which tinge the Blood with a red Colour,

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lour.

<sup>a</sup> Willis Pharm. Rat. p. 2.  
Art. Med.

<sup>b</sup> Andr. Casalp. specul.



lour, since they exceed those Outlets in bulk, can by no means come forth. And this is very evident from those *Blisters* which are raised by Fire: by the force whereof the Cuticle, which ought to have defended the Mouths of the Vessels, being divided much after the same manner, opens a Passage for the Serum.

Therefore, since *Vesicatories* both excite a Pain, and draw forth the *Serum*, they prove greatly serviceable in Distempers: and indeed this *Evacuation of the Serum* is to be looked upon as a prognostick, for unless it break forth, we may justly conclude that it will not very happily succeed. However, the vertue of *Cantharides* does not seem to be in the least confined within these Limits: which is so very extensive, and so surprising, that it can by no means be explained, unless we understand the manner in which the *Cantharides* affect not only the Skin, but the Blood. For if they were serviceable only in calling forth the *Serum*, without doubt the same quantity of *Serum*, carried off by the urinary Passages, would be equally advantageous. But in almost every Distemper, we may discharge as much *Serum* by those Passages, as is drawn off by the application of a *Vesicatory*; but it is plain from Experience, that in no Distemper we can find equal advantage thereby. It is very manifest, what force *Cantharides*, inwardly taken, are of in discharging the Humours, opening Obstructions, and quickning the

the circulation of the Blood: therefore, by the Antients were they used towards bringing down the Menfes, purging off a Dropfy, excluding the Foetus, killing the Worms, in quelling the Venom of a mad Dog, and finally in opening the cuticular Passages, when an *Impetigo* was become inveterate. And it is likely, that, when they are applied to the Skin, they pervade deeply, and rouse the Humours much in the same manner. For how should it otherwise happen, that *Cantharides*, applied to the Skin, should have such a remarkable Effect in a Pleurisy, Peripneumony, a Catarrh, heaviness of the Head, and distensions of the Nerves? That they should remove old Pains, especially of the Hips; and carry off Obstructions? That finally, by their application, the Humours should be better disposed to perspire, Sweat more easily raised, and all kinds of Pustules more readily thrown forth upon the Skin? And that this is generally so, we are abundantly taught from daily Experience.

Those indeed who either deny or overlook this internal Power of Vesicatory, yet when they endeavour to account for that racking Pain and Exulceration, which often arise from thence in the urinary Passages, confess themselves, that the Particles of the *Cantharides* have penetrated into the Blood; whose pungent Salts, since they adhere to those which are in the Urine, excite these grievous complaints. Thus whoever maintains any ill-grounded Argument, will fall into such Difficulties, that he cannot

cannot extricate himself out of, without dissenting from, and disagreeing with himself. But if their Force exert itself so vehemently in Parts far remote from the Skin, what reason have we to suppose, that in other Places they should lie dormant, and desist from their Operation? What hinders, but that they attempt some change of the Humours, through whatever Vessels they finally pass? Certainly the Disorders which sometimes ensue upon the use of *Vesicatories*, can be no other way explained, than that the *Cantbarides* exert their Force upon the Blood, in the manner we have mentioned. But this Foundation being laid, we shall easily understand, why they are sometimes hurtful to *hectick* Persons (especially if they are troubled with colliquative Sweats) and *bilious* Persons likewise, and to those who are naturally disposed to febrile Heats; they are dangerous also, if we may credit Authors, when the Body is full, unless a Vein should be opened: inasmuch as, since, they greatly attenuate the Mass of Blood, and hasten its Course, they bring on *Fevers*, *Inflammations*, and *Deliria*; or as it happens in *hectick* Persons, they dissipate too profusely that supply, which Nature has appointed for the support of the Body. In like manner in *slow Fevers*, in which the Pulse is found to be weak and languid, if *Blisters* bring any Relief, we presently perceive the Patient to grow better: which is very unlikely to proceed wholly from so small a discharge of *Serum*.

*Bellini,*



*Bellini*, who contends that the whole force of Vesicatories depends upon their Stimulus, affirms that the Pulse is also raised upon the same account. But I would gladly ask, whether or no any other Stimulus would effect the same? Whether or no either *Cautsticks*, or *Issues*, or *Setons*, or even those *Vesicatories*, which have no *Cantbarides* in them, are endued with that stimulating Quality, as to raise the Pulse not only for a time, but so to restore it, as it shall be able to continue its natural Course? *Purges* which do not reach to the Passages of the Blood, stimulate the Intestines: from which, however, the Pulse acquires no force at all. Without doubt they in some measure quicken the Circulation of the Blood, at the Mouths of the Glandules; they do not seem to be capable of affecting the mass of Humours itself, so as to give any additional strength to the Pulse. In like manner boiling Water, or a lighted Coal will raise both an Itching and *Blisters* on the Skin; yet so, as not to encrease the motion of the Blood in the least. Therefore, since in abundance of Distempers, those principally which affect the Head, Vesicatories afford a sudden and unexpected relief, not so much because they either *revel*, or *irritate*, or *evacuate*, as they seem to effect it by a certain other Quality. But if we reflect upon that force, which is exerted within, we shall comprehend the whole account of *Vesicatories*; and shall finally be enabled to judge of the best manner of applying them towards curing Diseases. Hence certainly

ly some light may be had, whereby that may be effected, wherein I require the diligence of the Physicians, that accurate Rules may be laid down concerning the use of *Blisters* in *chronick Disorders*, which may be both perspicuous and little liable to error and uncertainty.

But to return again to the Matter in hand: in *acute Fevers*, *Vesicatories* afford a very safe and expeditious Relief; which though they powerfully divert the febrile Matter from the *Brain*, yet they oft-times forward the other Fluxions, particularly of the *Sweat* and *Urine*, at least they by no means repress them. Neither need we be very scrupulous about suiting it always to the Patient's *Habit*: for whatever be his Constitution of Body, however heated either with *Bile* or a *thin* Blood, if the Fever be outrageous, small ill-conveniences are not so much to be regarded, as not to be at the same time solicitous about Life itself. For the Case is frequently so very dangerous, that there remains no hopes from any thing but *Blisters*, which, as it often happens, in *gouty Persons*, when the Matter, which used to flow to the extreme Parts of the Body, has fallen upon the Head and raised a *Fever*, so have we lately had a very remarkable instance of it: namely, while, by being over cautious, they abstained wholly from *Blisters*, it was found in a very few Days, how vain those pompous Promises were of procuring a Recovery by any other means. The same is experienced daily in the *Small-Pox*, *Measles*, *Fever*, either *scarlet*, or *erysipelatus*:  
in

in which Diseases, though the Blood be violent hot, and rapidly circulated, yet, we make use of this Remedy without hesitation or ill-success. Wherefore those Persons are by no means to be regarded, who condemn the use of *Blisters* in *nervous Affections*, in *ardent and continued Fevers*, altho' a *Sopor*, or *Delirium* should come on<sup>a</sup>.

Any one may very justly affirm, that more Persons have been freed from Fevers by this Method of Cure than any other, nay one may solemnly averr, that more People have been recovered by this, than by all the rest. Therefore *Sydenham* applied Blisters in the Cure of those *Fevers* which were so epidemick in the Years 1674, 75, 79, 85. and that with great Judgment: but why he omitted it in the others I do not very well understand; since the other Years, which he mentions, produced no Fever, wherein *Vesicatories* would not have proved equally serviceable. Whose use in the Cure of all acute Disorders is so very extensive, that whoever will consider these Histories of *Hippocrates*, will, I believe, find no one Fever, wherein he may not allow room for this Remedy in particular. However I am not so vain as to pretend with *Cacilius Folius* to correct *Hippocrates*, and show how he might have cured those very Persons, which he tells us died. This at least I may modestly affirm, that this one Medicine might have been serviceable, if any one could have proved so.

And

<sup>a</sup> Bagliv. de Vesicant.



And this advantage attends this Method of Evacuation above all others, that it may be always practised with the utmost safety: for the nature of the others is so very difficult and uncertain, that they cannot, sometimes, when the Disease is very violent, be attempted without danger; as we frequently Experience in *Bleeding*. Yet, does not almost every one abhor *Blisters* as well as *Bleeding*, however more dangerous it may be? But this, perhaps, is to be imputed to the weakness of the Patients; who, as they have naturally a great dread of Pain, so they also refuse a Medicine, which might be serviceable without giving them hardly any uneasiness. The same softness in the Physician, should not be carried so far as to become a fault: who ought undoubtedly, tho' a Person of great humanity, to appear rather a Torturer, when Life is in imminent Danger, than to comply with this Timidity of the Patient.

But that we may at last conclude this Discourse concerning *Evacuations*; let what I have laid before the candid Reader, be looked upon as Traces to those Fountains, whence the Cure of *acute Fevers* is to be wholly drawn. For I have gone over as briefly as possible, both the principal kinds of Evacuation; at what Time they ought to be made use of, according to the various nature of the Disease, and what moderation we ought to use when they are applied. It will be his part so to examine the force of the Reasoning, and narrowly

rowly enquire into the various Inclination of the Humours, as to discover perfectly by what more especial means the febrile Matter may be drawn off. This one thing I assure him, he will find by Experience, *that tho' many kinds of Fevers generally yield to Evacuations, without making use of any other Remedy: yet, there are scarce any, which, if they are become anything vehement, can be extinguished by any Medicine whatever, if this Method of Evacuating be set aside.*

F I N I S.



A N





TWO  
EPISTLES  
TO

*Dr. Richard Mead:*

THE ONE  
Concerning Purging in the second Fever  
of the confluent SMALL-POX:

THE OTHER  
Concerning some particular Kinds of  
the SMALL-POX.

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By JOHN FREIND, M. D.

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LONDON:

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T O

Dr. RICHARD MEAD.



Have often, Sir, praised my good fortune, and shall oftner do it, that there has been now for several Years so great a friendship between us, and such a similitude of Studies in that Art which we profess; for, as in every other part of Life, so especially in the practice of Physick, to think the same, and to judge the same, is highly agreeable. It being of the utmost importance, in entering into a physical Consultation, to be joined with a Person of Skill and Experience: neither does this regard only the restoring the Patient's Health, but the removing those Inconveniences, which, as things are, we generally experience in the Cure of Diseases more than ordinarily difficult. Add to this, that they who are deeply skilled and experienced in the Healing Art, abhor all dishonest Practices, and are found to be for the most part free from every mark of Ignominy. For since they are so little open to



Temptations, as not to be willing to comply with the Iniquities of Mankind, or to catch at their Applause by their Complaisance, they never suffer any thing to be done derogatory from themselves, or from Honesty, or even injurious to their own Reputations. For whatever share of Fame or Esteem is acquired by this obsequiousness, they imagine it will prove entirely empty and vain: and by wisely consulting their true Interest, and pursuing the Path to true Glory, being both furnished with Knowledge, and experienced in Practice, and disdaining also every indecent Artifice, they seem to think worthily of themselves and their Profession.

Therefore whoever desires to excel in this Art, as well as in Painting or Sculpture, must necessarily have a Genius and Disposition for that which they would aim at: for no one, whatever pains he may take, can become a Physician, if he be not in some measure born so. For there are in this Art many things very obscure and abstruse, many things complicated and subtle, which cannot be perfectly taught by any Precepts, nor fully and accurately explained: so that, altho' many things may be learned by the Physicians from physical Writings, in which he ought to be extremely well versed; yet much more must be left to his Judgment and Sagacity. Neither is this in any thing more apparent, than in distinguishing between the variety of the *Pulses*: for those who are well skilled in this Affair,

Affair, are sensible it is not to be learned from the Dictates of any Master, but from daily Practice and an happy discernment. For in nothing is it so evident as in physical Matters, of what importance a natural acuteness is, and an happy nicety in judging. Do those then, who are of a light and unsettled Temper, seem to promise any great Matters in this Science, in which no conjecture can be made of things the most difficult, without much Sagacity, and continued and severe Study? Or are Men of a small Genius and mean Talents sufficiently capable of acquiring this shrewdness, which ought to be found in every Physician? Or lastly, can one think those Persons can possibly be quick-sighted in an Affair, of all others the most abstruse, and which requires the most exquisite Judgment, whom, if we were to try in other matters, we should confess to be plainly void of common Sense? Yet we see daily, that many, who are not bless'd with the least Sagacity in other Affairs, boast of their great Knowledge in the Judgment of physical Matters: and that the same Persons upon that very account, because they want this Understanding, constantly pursue that Track in their Practice, which they have by chance once entered into, and grow old as it were in the same round, without making the least progress or advance.

But this fortune has also befall Physick, that they who have gained a moderate Reputation in the other, even the illiberal Arts and

Sciences, should, tho' never so preposterously, of a sudden crowd themselves into the first Class of Physicians. But granting, indeed, that those Arts and Sciences are very specious and curious; yet what affinity they have with the Contemplation of Diseases, or with an happy Sagacity in the Cure, is not easy to conjecture. No more undoubtedly than they have with the Study of Law; but no Student in the Law was ever yet found, who dreamed of making his Fortune at the Bar by these Artifices. These elegancies are reserved for those Gentlemen who are to act their Parts upon this our Stage of Physick.

This too I imagine to have been the Reason, why a great many Physicians, tho' Men of excellent Wit and Learning, have yet turned their Thoughts another way, and excell'd in any Art rather than their own: nay, they have so far excelled, that many of them have surpassed the Historians, Orators, and Poets, in their own proper way of Writing. They chose rather, I suppose, since they found the Judgment of Mankind so wavering and unequal concerning the Professors of Physick, to apply themselves to some other Studies; by which means, as they might more freely indulge an inquisitive Mind, so they might the better recommend themselves to the popular Esteem. As if there were not Materials enough in this our Study, to exercise the most acute Genius, to satisfy the most inquisitive Temper, and which might require the whole Abilities



Abilities of a Man, be they whatever they will.

But this Complaint of the Students of Physick, is indeed very antient, and familiar in *Galen's* Time particularly: for he, who had bestowed no small Pains and Labour upon the other Sciences, but more especially Physick, with a remarkable share of Reputation, complains with Indignation, that very many<sup>a</sup> in his Time, either by visiting in a Morning, or reveling at Night, or by pursuing some other Method of Adulation, became very famous Physicians; and that Letters and the liberal Arts were esteemed, according to the vulgar Opinion, so little advantageous to a Physician, that even Carpenters and Smiths, Cobblers, Dyers, Linen-Drapers, laying aside their Craft and Profession, ventured upon the Practice of Physick: but that those, who prepared their mixtures for Painters and Perfumers, contended even for precedency. With a like Arrogance, and at the same Time, *Thesalus*, that audacious Empirick, whom *Galen* mentions to have been educated under his Father, carding of Wool in a Weaver's Garret, and there furnished with the Elocution of the Weavers, wholly ignorant of Letters, founded a new Sect, and condemning all the Sentiments of the Ancients, and inveighing with a sort of Madness<sup>b</sup> against all others, boasted himself to be the only Physician; and was confident that he himself, altho' a Fellow just

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<sup>a</sup> *Method, Medend. Praefat.*

<sup>b</sup> *Plin. Hist. Nat. 29, 1.*

run away from the *Loom*, without Art, and without Letters, could deliver a whole System of Physick in one single Book. All sorts of Wounds, however dissimilar, he treated in the same Method, ordered only <sup>a</sup> *unctuous* and *glutinosæ* Medicines: and uttering several Thousand very trifling Verses, he contended that there were only *two* Diseases in all manner of Living; namely, a Constipation and a Flux: perhaps too, if he had been a little wiser, he would have laid down *two* Remedies only for all Distempers. And this Error indeed, which even a Youth, trained up in the more simple Sciences, might immediately discover, raised *Theſſalus* to that pitch of Insolence, as to think he had found out something great and excellent. Thus generally do empty trifling Fellows, who are neither supported by any Skill, or any Authority, glorify and extol themselves in those very things, which, in other Persons, create Mirth and Laughter.

Be not diverted therefore, either from your Method of Practice, or your Design of Writing, by any Slander or Scurrility: but consider this has often happened to very excellent Men, and ofteneſt indeed in this Path which we are now perſuing. Thus *Harvey* had his *Parifanus*, a Fellow the moſt empty, and the moſt illiterate: neither did *Willis* want his *Meara*, however mean and contemptible. But go on to oblige the whole Body of Men of Learning,

<sup>a</sup> *Method. Medend. Lib. 6.*

Learning, and publish, at last, what you have so long laboured concerning every Kind of the *Small-Pox*, that every one may be convinced, what Esteem and Authority a physical History, built upon no Hypothesis, ought to have; and how vastly distant it is from the Dreams of *Empiricks*.

In the mean while, give me leave to urge You in this Epistle to the finishing that Work; in which, lest I should seem to intrude into that Province which I desire might be reserved for You, I shall say nothing of the *Small-Pox*, but their Cure; that especially, which is carried on by *purging* Medicines, when the *secondary* Fever runs high. And I undertake with Pleasure a second Explanation of this Method of Cure. For since this Method appears to be new and unheard of by most Persons, and some have either little understood, or perversely interpreted what we have said upon this Subject, I shall not, I believe, ill deserve of my Countrymen, if I should take somewhat more pains in an Argument so important, and entirely untouched by the Physicians; however, extremely conducive to the Health of Mankind. For by this Medicine, I do most religiously affirm, that I have restored many to their Health; and I am firmly persuaded that more have by the same means been recovered by You. But as this Affair must be managed with some caution, and all the Symptoms of the Distemper must be diligently and judiciously observed, I will explain,



plain, as well as possible, how those Persons, who are less versed in this Method of Practice, may understand and comprehend it.

To effect this, I shall produce some singular Cases: for by that means, both the continued Series and Connexion of the Symptoms, which ought chiefly to be regarded in the management of the Sick, will more distinctly appear, and the Method of Cure itself will be more easily discovered. Neither does it suit with my Leisure or Affairs, nor does the Thing itself require that I should bring out all my Examples together: it will be sufficient to select only the chief of those Cases, wherein I had an Associate or Assistant joined with me in consultation. Lastly, I shall insert such Observations as I think will conduce either to the better understanding the course of the Distemper, or the method of Cure; so that I shall Study both the Variety, and the Profit of the Readers together. These Gentlemen will, I hope, easily pardon me, if I have delivered any thing inaccurately: both because I have at present but very little leisure, and the thing itself, being content to be taught, admits of no Decoration.

This must be observed by the way, that some of those *Small-Pox*, which I shall describe, were of the *coherent* Kind: which differ so little from the Nature of the *Confluent*, that they exhibit much the same Signs, and raise plainly the same Fever, at the time of Suppuration. Besides that Spitting which is  
peculiar

peculiar to the *confluent* Sort, is very rarely wanting in the *coherent* : so that Morton <sup>a</sup> very justly affirmed, *that the Salivation ought deservedly to be reckoned a Symptom of the Disease, when it is either malignant, or, at least, moderate; when the secondary Fever, or, at least, an uncertain Event, may be expected* <sup>b</sup>. For whatever imminent Danger there may be, it does not arise so much from the *kind* of the Pustles, but entirely from the *Number* : which, if it be great, we ought to be equally anxious about the Event, whether they run together or not. Besides, in order to make this presage, we must regard the *Number*, not only on the Face, as some pretend, but also all over the rest of the Body. Wherefore both the Species, as well *Coherent* as *Confluent*, as they differ very little in other Matters, so they require exactly the same Method of Cure. It is worth also observing, that however the Diseases, whose History is here delivered, are entirely alike, yet some have different Seasons of being at the height and going off. This Kind, perhaps, may not be absurdly called an *Anomalous*, or irregular *Small-Pox* : but yet they are such, which occur very much almost every Season, and common to almost every Age. Neither have I yet seen the *Small-Pox* of this Kind, which are more exquisitely adapted to this regulation of the Days. For sometimes in the Disease itself the Nature of the Days is changed : and that

<sup>a</sup> *Vid. Hist. 1.*

<sup>b</sup> *De Variol. 176.*

that becomes more violent which used generally to be more mild. So that he must necessarily be greatly deceived, who calculates the Times too nicely and exactly: for many things usually intervene, which easily produce that variety in these Distempers, that the Patient is in the greatest Danger sometimes on this Day, sometimes on another.

### Case I.

**A** Gentleman of a noble and illustrious Family, was seized violently with that kind of *Small-Pox*, which is called the *Coherent*. A Nausea, Vomiting, and great Pain in the Head had preceded. He was attended by two eminent Physicians in *Yorkshire*, Dr. Neal and Dr. Cotes. On the *sixth* Day I was sent for. The Day before he was seized with a Delirium; the Pustles entirely pale; his Face something depressed. Therefore *Pulv. è Chel. 69. C.* was ordered him by his Physicians, and a Blister judiciously applied to the Neck. I found him greatly disordered in his Senses, yet entirely free from a Fever, which is very rare in Persons delirious at this time of the Disease. The Pustles, which were very much crouded, hardly elevated, and as yet of a palish Colour. Therefore in this violent Danger we applied very large Vesicatories to both Arms: and prescribed this Medicine,

℞ *Theriac.*



℞. *Tberiat. Andromach. Pulv. è Chel. 69.*  
*C. aa ʒi. Rad. Serpent. Virg. gr. xv.*  
*Syr. Caryophyllor. q. s. M. F. Bolus statim*  
*cap. cum Julap. perlat. præscr.*

When he had taken these things thrice, the next Morning, namely, on the seventh Day, the Pustles were again raised, the Edges reddened, and the Interstices likewise of a florid Colour.

You see what surprising Effect attended this warm Medicine: and to confess the truth, this Method of Cure, with the stronger *Cardiacs*, which is so much celebrated by most Authors, and *Morton* accounts as specific, is hardly followed with any Judgment, unless at this one Time of the *Small-Pox*, when they are either not sufficiently advanced, or else fell in again. Therefore *Rhazes*<sup>a</sup>, that great Master of the *Arabians*, orders *Saffron* to be given but *two or three* times, and that in a very *urgent necessity*. This kind of Remedy becomes the more powerful when mixed with *Opiates*: which, what effect they have in promoting the Eruption of Pustles of any kind, seems first to have been understood by *Sydenham*, though contrary to the vulgar Opinion. So far is this divine Remedy from being of that cold Nature, as some fancy, as to constringe and repress all the Humours.

In the Evening, the *second* Fever, as it is called, was observed to come on: neither yet was the Delirium any thing abated. Wherefore

<sup>a</sup> *De Pestil. c. 7.*

fore a Blister was again applied to the Neck. At present we had recourse to the more moderate Remedies, and abstained from somniferous and the hotter Drugs. His Diet was thin, and he was allowed either Barley-Broth or Rice-Gruel at his pleasure, in order to dilute. He was so restless that Night that he had hardly any propensity to Sleep. In the Morning, on the *eighth* Day, he came something to himself: but this Truce was very short and fallacious: for in less than an Hour he was again delirious. The Pustles however were filled with digested Matter; altho', if you regard their size, they were very small. The Face was not in the least tumified: the Neck only was a little swelled. No Spitting through the whole Course of the Distemper; which, since it *ought* to be perpetually constant in this kind of *Small-Pox*, is in *Sydenham's* Judgment, the most unhappy Symptom of all <sup>a</sup>.

The Fever was extreme violent; the Pulse quick and raised, yet full and strong: he was exceeding restless and raving almost like a Madman. Wherefore Cupping-Glasses were applied and six Ounces of Blood taken away. Vesicatories were also applied to his Wrists. Besides, by the help of a Clyster, he had two Stools in the Evening. By this means he gained some short rest, and his Pulse became more temperate: yet the same Disorder in his Mind at times. But, however quiet the Distemper was at that time, I did not imagine things so safe,

<sup>a</sup> *Variol. Reg. An. 67. 129, & 135, 149.*

safe, but that they would of themselves take a turn for the worse. Therefore when we discoursed among ourselves, what danger there seemed to be any apprehension of, I declared it was my Opinion, that if any such thing happened, the Belly ought to be moved with some gentle Potion. They immediately confessed that they had sometimes tried this Method of Cure themselves, and that at this time they likewise readily assented to it. It happened, indeed, as we suspected: for his Head began to be so very heavy before Midnight, that by Morning he was in a manner stupid. He had at the same time a *subfultus Tendinum*, and a violent Fever; the Pustles were dried up; neither was there any remains of a Tumor on the Hands, nor on the Feet, and much less on the Face; and his Life was in the most imminent Danger. For that prognostick of *Sydenham* hardly ever fails, namely, that the Patients *must immediately die* at this time of the Distemper, unless a *remarkable Tumor* of these Parts supply the Place of the Spitting, which is either defective or intercepted<sup>a</sup>. This was the state of the Disease on the ninth Day, and that almost deplorable. In these Streights intervened the ingenious and judicious Dr. *James Keil*, whose Friendship as it had been long extremely agreeable to me, so has his Death been to me at present no less grievous: and since his Opinion was the same as ours, and his Judgment the same concerning the Method of Cure,

we

<sup>a</sup> *Variol. Reg. Ib. 132. 135. 148.*



we agreed that the Distemper ought to be treated in this manner. The Head was immediately shaved, and a Vesicatory applied all over. Six Ounces of Blood were again drawn off by Cupping-Glasses. A sharp Clyster was injected, and repeated about four Hours after: whereby he had five Stools. By this Method he received so much relief, that both the Fever remitted a small matter, and the Coma was somewhat abated. But, lest every thing should in a short time grow worse again, which was greatly to be feared, we were now determined to prescribe a Purge. Neither let any one accuse us of having been rash and precipitate in our Advice, because we ventured to try this Method of loosening the Belly, even before the *ninth* Day was over: since it was very evident, that unless he was relieved by these means, he would not have survived till the Morrow. A short space indeed, within which, if nothing had proved serviceable, the Patient would have died! For in this Case we ought not to reckon the Days so curiously as to weigh the Condition of the Patient: for the Physick ought not to be adapted to the measure of the time, but to the exigency of the Distemper: and the sooner these grievous Disorders come on, the sooner too must we seek some relief. Neither can any constant regard be had to the Time or any other Rule laid down concerning this Institution of Purging, than that, *when the Pusles are once dried up*, and whenever any difficulty happens, requiring the Physician's Sagacity, he

he is under the greatest necessity of prescribing it the very first opportunity.

Since then the Patient was reduced to these Difficulties which have been mentioned, about Four in the Afternoon we prescribed the following Draught.

℞. *Decoct. Sen. Gereon.* 3 ii. *Sal. Mirabil.*  
*Glauber.* 3 ii. *Syr. de Rhamno Cathart.*  
 3 iii. M.

This was taken at twice, in about the space of three Hours: from which, after he had had *six* Stools, in the Morning, on the *tenth* Day, both the Coma and Fever entirely vanished together.

Thus, in the very short space of about *twelve* Hours, he, who seemed to be dying, and given over by all about him, recovered such certain Hopes of his future Welfare, as if he had never been in danger of his Life. Therefore, on the next Day after, we departed with great Pleasure.

Give me leave to add a few things in this Case, which are much worth our observation: and to recollect the chief Symptoms of the Distemper, whence I received some assurance that he might be delivered out of this extreme danger, by the help of Medicine. The Pustles, even at the worst, were of a good Colour, and their outer margins, when the Face was dried up, very florid, both on the Breast, and on the Limbs. The Urine, tho' it did flow in very large Quantities, continually deposited a Sediment on the five last  
 M Days;

Days; and that constantly, tho' he used those diluent Drinks, which I have mentioned, abundantly. These, indeed, were no contemptible Signs; however, there follow some others, which afford us much greater certainty. There was not the least difficulty of Breathing: the Pulse, even when the Fever and Delirium ran highest, never intermitted: but as it was carried with a full Impetus, so after the use of Evacuations of any kind, it was found to be both more forcible, as to the Stroke, and more distinct, as to the Intervals. But, the Pulse and Breath being in this plight, I was hardly ever deceived with purging Medicines, tho' the other Symptoms were very grievous and terrible. However I had rather try this kind of Remedy, when the Pulse is rather somewhat diminished, than in any great difficulty of Breathing. But how repugnant soever one, or both, of these Signs should be, Purging may prove an entirely doubtful Remedy; or sometimes, perhaps, no one at all: (for what Medicine will avail any thing in the very Jaws of Death?) yet when they both prove favourable, tho' the rest should threaten danger, that the Affair may be carried on chiefly in this way, I have learned from repeated Experience. The Judgment therefore of the Physician ought to be directed principally by this Rule.

*Case*



## Case II.

A Man about thirty Years of Age, studious, of a full and gross habit of Body, felt the Signs of the *Small-Pox*. He complained much of his Head and Stomach, as if they were both oppressed with a certain Load. All his Limbs seemed stiff and tired. His Eyes shed Tears. And the *Small-Pox* came out plainly of the coherent Kind. The ingenious Dr. *Keith* attended him as his Physician. I being sent for to the Patient on the *third Day*, found the Pustles greatly crowded, not only on his Face, but also over his whole Body: He had passed the Night with the utmost uneasiness; so that he seemed one while to be seized with a Coma, another while with a Delirium. He was troubled with a very difficult Breathing. The Eruption of the Pustles seemed now to be finished; which yet were so little raised, that they seemed to remain still within the Skin. Their margins were greatly inflamed, and as it were ardent with Blood. Which redness, when it is very intense, is with good reason placed by *Rhazes* among the bad Symptoms. His Pulse quick and great, and the Fever violent. He was ordered the use of the milder *cardiack* Medicines, and those Liquors which might greatly relieve the Lungs. A Vesicatory was also applied to the Neck. He was tolerably easy

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all Night, but his Sleep seemed rather to arise from his Distemper, than any Rest which might refresh Nature. So that on the *fourth* Day every thing seemed much the same, except that the Pustles were somewhat more e-lated. In the Afternoon, both his difficulty of Breathing and Drowziness were violently encreased. We therefore ordered a Vein to be opened immediately, and ten Ounces of Blood to be taken away. Whence his Breath was much easier, and his Pulse more regular. In the other Symptoms no change.

Perhaps this advice of opening a Vein, will appear too bold, to those Persons who are too scrupulous with regard to the Time, altho' it is done in a corpulent Body, and one very full of Blood; as if it was too much rashness to try even an uncertain Remedy, when the Question was not only of alleviating the Disease, but concerning Life itself. But the *Arabians*, who delivered the first Precepts concerning this Distemper, either followed this Method of opening a Vein themselves, even after the *Small-Pox* were come out, *where there was a redundancy of Humours*, or seem, at least, to advise others so to do <sup>a</sup>.

Therefore those Physicians, who for about *five hundred* Years delivered hardly any thing but what they had been taught, taking care only to transcribe faithfully these Monuments of the *Arabians*, have laid down the same Rules;

<sup>a</sup> Rhazes, Contin. 421. De Peste. c. 8. & 14. Avicenna, Tract. 4. de Febr. c. 10. Alfaravins 141. d.

Rules; however, they have laid them down in such a manner, that it hardly appears they ever practised what they had taught <sup>a</sup>. At length, about the middle of the *sixteenth* Age, *Gometius Pereira* <sup>b</sup> of *Methymna*, whom I often find with good reason to have left the common Path, first blames, as I imagine, the *Arabians* as too cautious in this Affair, and expressly affirms, that, *if there should be an Inflammation or Plenitude*, even after the Eruption of the *Small-Pox*, we may confidently let Blood: farther, that by omitting this method of Cure, many Children *have died either with a Flux of Blood at the Nose, or with Ulcers*. This indeed is often proved by Experience: but he might have added this too, that very many have been recovered, at this time of the Distemper, which is also intimated by *Rhazes* <sup>c</sup>, by a Flux of Blood from the Nostrils, or the urinary Passages: which is a very evident Token, that Nature sometimes requires this kind of Relief.

The same method of Cure, if any grievous Disorder intervened after the Eruption of the *Small-Pox*, was instituted by *Holler* <sup>d</sup>, *Parey* <sup>e</sup>, and *Eotal* <sup>f</sup>, the most celebrated Physicians about that Time among the *French*: the last of whom, very laudably restored this Practice

M 3

of

<sup>a</sup> *Francisc. de Pedemont.* 137. *Bernard. Gordon.* 54. *Petrus de Bayro de Peste.* 766. *Joh. de Conco Regio, Marcell. Donatus,* 156. *Nicolaus Florentin. Tr.* 2, 132. *Æmil. Campolong. c.* 43.

<sup>b</sup> *Nova Medicina* p. 104.

<sup>c</sup> *Continent. Lib.* 30. p. 421.

<sup>d</sup> *Lib.* 2. p. 66.

<sup>e</sup> *Lib.* 19. 2.

<sup>f</sup> *De Curatione*

*per V. S. c. 3.*



of opening a Vein; which had been long laid aside and almost forgot, and applied it successfully to very many Distempers. But about this Time, the Fables of the *Chymists* filled Mens Heads with imaginary Terrors, and, as it were, bewitched them; that errant Quack *Paracelsus*, being the principal Ringleader: and those Persons, who imagined every thing might be done by a *Nostrum*, either used, or abused, the weakness of Mankind in such a manner, and raved so violently against Bleeding, that those Physicians, who had Skill and Judgment, did not dare to open a Vein, even in the greatest danger of Life. Who nevertheless, lest they should seem to do nothing according to Art, and to be wholly wanting to their Patients, did not fail either to apply Leaches, or to lessen the quantity of Humours by the help of Cupping-glasses <sup>a</sup>. Neither is it an uncommon unhappiness in Physicians, in whom there is either so little constancy or authority, that they had rather comply with the Opinion of others, than stand to their own Judgment. Thus *Ludovicus Mercatus*, who, however he affirmed that Blood ought to be let without Hesitation, tho' the Small-Pox are very numerous, if they arise with a fresh putrefaction, perceiving afterwards various difficulties in this Affair, and being terrified perhaps with the deceitfulness of the Disease, presently recalls himself; and being uncertain and fluctuating as to his determination, throws this

<sup>a</sup> *Joseph. de Medicis. 42. Diamedes amicus c. 10.*

this scruple in his Readers way; Neither, says he, is it easy to find out what ought to be done: for it appears very hard that the Fever should return again, after a Crisis has been once made; and if you let Blood, it will be attended with Danger and Reproach; if you should omit it, the surer is the Danger. But near the beginning of the seventeenth Century, these Delusions of the Chymists becoming less prevalent, abundance following Gometius, either by chance, or imitating him thro' design, maintained this method of letting Blood.

<sup>b</sup> But the clearest and most express account of all, concerning Bleeding, was given by *Epiphanius Ferdinandus*; whose Rules, since they seem not ill founded, we shall not think much to transcribe the very Words themselves.

“<sup>c</sup> But we shall illustrate this Doctrine of Bleeding more clearly: for, as often as there is any urgency, Blood must be let at all Seasons, if there be any Indications present: for first, when the Small-Pox and Measles appear, and the Fever is not gone off nor the other violent Symptoms, then is it proper to let Blood: secondly, when they have appeared for a Day, and then fall in again, Blood must immediately be taken away.

M 4

“ Thirdly,

<sup>a</sup> 588.

<sup>b</sup> *Diomedes amicus Tract. de Variolis*, cap. 10. *Anton. Ponce de Sancta cruz, Imped. Magn. Aux.* 3. 17. *Horstius de Variolis.* *Joseph. de Medicis, de Febr.* 42. *Ranchinus de puerorum Morbis*, 275. *Zacutus Lusitanus* 786. *Angenius lib. 10. 3.* *Petr. Paschalis* 117, 463. *Joh. Chicotius, Epist. de Variolis.* *Heurnius Aph.* 2. 15. *Jul. Cas. Claud. Emp. Rat.* 286. *Bartholin. Cista Med.* 601. <sup>c</sup> *Casus Medic.* 78.

“ Thirdly, when there are any other grievous  
 “ Symptoms, besides the Symptoms of the  
 “ Small-Pox, as a Quinsy, obstinate Phrensy,  
 “ *Letbargy*, Dysentery, violent Ophthalmy, or  
 “ any other dangerous and severe Disorder  
 “ whatever; and thus *Rhazes* lets Blood in  
 “ the Small-Pox and Measles, when attended  
 “ with a *Dysentery*.” In like manner, in a  
*difficult Breathing*, or when a great Inflammation comes on in the ripening of the Small-Pox, or an Erysipelatous Tumor should seize the Head, *Mayerne* orders the Veins, either under the Tongue, or under the Ears, to be opened <sup>a</sup>: in which manner, about twenty Ounces of Blood being taken away, that judicious Practitioner recovered the Countess of Bedford, when she was even ready to expire. And the method of Cure was the same, which that excellent Practitioner *Riverius*, seems very much to have followed in these Cases; who judging the Patients ought to be treated as labouring under a continual putrid Fever, not being content with once Bleeding, advises it to be repeated, that some part of the Load being drawn off, Nature may the more easily expel the rest <sup>b</sup>. Besides, both in later Date, and much about the same Time, the three Kings of three very great Nations, Spain <sup>c</sup>, France <sup>d</sup>, and <sup>e</sup> Britain, were recovered out of this difficult Distemper of the Small-Pox, by repeated Bleeding. So that not only in these Regions,

<sup>a</sup> P. 449.

<sup>b</sup> Lib. 17. c. 2.

<sup>c</sup> Carolus xi.

<sup>d</sup> Ludovicus xiv. <sup>e</sup> Carolus ii.



gions, but in *Italy*, and even far *North*, this Custom of opening a Vein has prevailed, if at any time the Disorder was very great, altho' the Small-Pox were coming out. Therefore you find our Countryman *Sydenham*, discoursing very accurately concerning the Cure of the Small-Pox, however little he might favour this Medicine, nevertheless advises it, if either the Face should be but little swelled, or a Phrensy should come on <sup>a</sup>. Whence it is something surprising, that *Morton* was so displeased with this kind of Remedy, as that he should wholly reject it in this Stage of the Disease <sup>b</sup>; but he perhaps, since he contended that the Distemper itself proceeded from some *venomous Taint*, would appear to be little constant to himself, if he approved of the taking away any Blood; therefore he is wholly intent upon quelling the Poison of the Distemper, with *Alexipharmicks* and *Antidotes*. Other Persons perhaps have a different Reason, who imagining the Small-Pox to be nothing but a certain natural *Crisis* of the Humours leave almost every thing to Nature, which is, as they suppose, powerful enough of itself; so that the Physician ought not to attend so much as an Artist and Assistant, as a mere Spectator. As if there were not, tho' there certainly are, in the course of the Small-Pox, times, in which, tho' the Eruption should not proceed unhappily, the Physician's Judgment might avail: who, when matters have taken a turn

<sup>a</sup> P. 153.

<sup>b</sup> P. 201. 204.

a turn for the worse, since he might foresee the rest, might, I believe, discern more particularly, what relief is to be expected from Bleeding. For can any thing be more absurd, than when any certain danger threatens, to doubt, whether that Medicine ought to be applied, which has been very often found to have restored the Patient, tho' it may have sometimes deceived the expectation of the Physician? So true is the Judgment of *Hippocrates*, that, when *the Disease is extremely dangerous, Experiments ought to be tried: for if they should succeed, you recover the Patient; if not, he only suffers, what would otherwise have happened* <sup>a</sup>.

But to return to the Patient's Case. In the Morning, on the *fifth* Day, he was very sleepy: and his Delirium returned at times: the Pustles not at all advanced. A *subsultus Tendinum*, and a frequent trembling of the whole Body. Blisters were applied to both Arms. On the *sixth* Day, about Eleven, he lost the faculty both of Speaking and Swallowing: the Pulse unequal as to Time, sometimes also cut off. After this manner he continued more than two Hours. Altho' he was now in extreme danger, as being Dumb, and as it were strangled with a difficulty of Breathing, yet we thought he was not to be deserted as one we dispaired of; being determined to try what Medicine might be able to Effect; therefore, Cupping-glasses being applied,

<sup>a</sup> *De locis in Homine. 36.*

ed, eight Ounces of Blood were drawn off: whereby his Brain was something refreshed, and his Breath freer. His Pulse became stronger and more regular. He could now swallow what was offered him: wherefore a large quantity of Drink was ordered him. However, he uttered not one Word unless any one first spoke to him: His answers however, for the most part, rational. This Day, and the two following, we gave him a Medicine compounded of *Radix Contrayerva* and *Crocus*. Vesicatories were applied below the Elbows and to both Legs. Late in the Evening, the Pustles began now first to swell.

On the *seventh*, the Pustles more swelled; of which, some were distended with Matter; others resembled empty Bladders: the redness on the Margins not so intense. The Pulse quicker, and the Fever still continued. He Spitting free and copious; the Breath easier: however too great a drowsiness remained. Than which *comatose Affection*, tho' Morton thinks <sup>a</sup> it seldom happens without some great Error committed in the *Regimen* (which is however often otherwise) yet he justly affirms that there is no *worse* <sup>b</sup> *prognostick*. Yet the same Writer, whenever the Patient falls into this Danger, whatever it be, seems, without any reason, to be afraid of opening a Vein. But why he should allow of Bleeding in the *first* <sup>c</sup> stage of this Distemper, when a *Coma* urged it, and not in the *second* and *third*, I do



do not well understand. But to speak my Mind freely, you know in that Author, altho' he has with some pains collected many things relating to the Small-Pox, there is often wanting both Order, Perspicuity, and Judgment: who, however prolix, often teaches us nothing; and oftner obtrudes Precepts, either trifling, or else faulty: but almost always wrests the whole method of Cure to that *Hypothesis*, which he had coined concerning I know not what *taint* of the *Spirits*.

On the *eighth*, all things much the same. The Spitting proceeded pretty much according to desire. The Pulse quick, but neither low, nor weak, The Face free from all swelling. The Blisters discharged a great quantity of Serum. All this while he made Water very plentifully, but it had no sediment in it. In the Evening, neither was there now any swelling in his Face. The Pulse the same. The Urine very pale. Neither was he yet freed from his sleepiness and Fever. The Pustles on the Face were almost dried up. A Clyster was injected, which gave him two Stools. A Vesicatory was again applied to the Neck. In the Night he was often delirous. The Fever heightened: and the Pulse quicker.

On the *ninth*, hardly any change, except that the Spittle flowed somewhat slower. The same Remedies were repeated; in the Evening a sharp Clyster was injected; whereby his Belly being twice moved afforded him some relief. For his Strength was so little diminished, that  
his

his Pulse became thereby stronger. His Fever however nothing milder. His Face being entirely dried up: his Hands were a small matter Swelled. In the Night he had *two* Stools.

On the *tenth*, all things much the same, except that his Brain seemed to be more affected. At ten of the Clock therefore, we unanimously ordered him as follows.

R. *Decoct. sene Gereon.* 3 iij. *Cremor. Tart.* 3 i.  
*Aq. Pæon. Comp. Syr. de Rhamno Cathart.*  
*aa* 3 iij. M. F. *Hauslus statim sumend.*

R. *Aq. Cerasor. Nigr.* 3 vj. *Cinamomi fort.*  
*Tinct. Croci cum Aq. Ther. pp.* *aa* 3 i. *Con-*  
*fect. Fracast. S. M.* 3 iij. M. *Cap. Cochl.* iij.  
*post sing. dejectiones.*

He had *four* Stools more. The Urine of a deep Colour; small Clouds were now first suspended in it; and it also subsided a little. The Pulse fuller and stronger; although it abated nothing of its quickness. His Head even still heavy. Wanting to make Water he called for the Chamber-Pot, and had one Stool imperceptibly. He was very restless and talked sometimes wildly. The *Cardiacks* which had been prescribed were repeated.

On the *eleventh*, the Flux of the Saliva ceased. The Tendons sometimes convulsed. Six Ounces of Blood were taken away by the help of Cupping-Glasses. In the Evening a Clyster being injected produced *three* Stools. The other Symptoms much the same.

On

On the *twelfth*, the Urine flowed abundantly and of a good Colour. He had an easy and natural rest for three Hours. The Pulse as it was sufficiently great, so was it slower. His Brain something relieved. He again took the *Cathartick Draught*, which produced three Stools. After each Stool he grew livelier, and in the Evening the Stupor on his Senses entirely vanished. Thus he, who for *eleven* Days, labouring under a most severe Distemper, had lain as it were Lethargick, by this Method chiefly of Evacuating, shook off his drowsiness and his Fever.

### Case III.

**G**IVE me leave, Sir, to relate a Case or two, wherein you joined your friendly help with mine, and the Cases proved singular.

In a noble Youth, the *Small-Pox* broke out much in the common manner, attended, namely, with a Nausea, Pains in the Back and Sides, and a violent heat; they were so extremely thick indeed, not only in the Face, but also on the whole Body, that they were almost in all places run together; however something more distinct on his Face. The Pustles were therefore, as is the Nature of the Disease in this Case, very depressed, and less filled with Matter. He was daily attended with the utmost Care by Dr. *Crompton* a Physician at *Windsor*, who had ordered in the beginning of the Distemper a Vein to be opened, and the Belly



to be loosened with a Clyster. With the use of moderate Cardiacks and Opiates, he reached the *seventh* Day without any violent complaint: except that he was now and then delirous in the Night. Therefore Blisters were applied to the Neck and Arms. The Spitting which arose the *fourth* Day proceeded very happily to the *twelfth*.

But on the *seventh* Day, he grew something feverish, whereby his Sleep was a little more disturbed. Because the Blisters hitherto applied had but small success, two more were applied to his Wrists.

On the *eighth*, his Pulse too quick. The swelling on his Face very small. The Matter in the Pocks as it was very little, so was it extremely crude. He drank abundantly. No complaint of his Throat, Ventricle, Head, and Breath. In the Night he was restless, and sometimes also delirous. The tenor of the Fever continually one and the same.

On the *ninth*, therefore Blisters were also applied to the Legs. Neither are they at any time hardly applied without Reason, especially at this dangerous time of the Disease: which how much they avail in almost every kind of Fever, since it has been already sufficiently explained, I shall not now pursue any farther. These, having been long ago brought into use by the *Italians*, against malignant Fevers, were first, as I imagine, introduced into the Cure of the *Small-Pox* by *Mayerne*: whose efficacy he judged so greatly to exceed every thing else,  
that

that in a *very dangerous Case*, he ordered nine to be put on together. Wherefore they are deceived, who fancy his Treatment to have been in all Cases mild and agreeable.

But our Patient had not only Vesicatories applied but a Clyster also injected in the Evening, which produced *two* Stools. In the Night his Sleep was short and interrupted, his Delirium returning at times.

On the *tenth*, his Face was dried up, his Hands were something swelled: but the Pustles being on these, as well as on the other Limbs, run together, raised here and there very large Bladders; wherein there was a great deal of indigested Matter. These kinds of Blisters, *resembling Burns, and distended with a limpid Serum*, are described by Sydenham<sup>a</sup>: which Serum was so very acrid, that it sometimes *blackened and sphacelated the subjacent Flesh*. It was remarked also by that sagacious Practitioner, that the crudity of the Humours in this kind of Distemper might be the better understood, that the Patient's Circumstances were not safe for the most part before the *fourteenth* Day, and sometimes also not before the *seventeenth*<sup>b</sup>. Which happened, as we shall see by the by, much after the same manner to this our Youth.

In the Morning *Rhubarb. gr. xxiv.* were prescribed him, but this Medicine not answering, about Noon a Clyster was injected, which gave him *two* large Stools.

On

On the *eleventh*, the Cough, which had troubled him for four Days, abated. Towards finishing the Cure, we proceeded thus.

*R. Decoct. Sen. Gereon. ʒiii. Mannæ Syr.*

*Rosarum solut. a a ʒss. M.*

This gave him *four* Stools: and an Hypnotick Draught being taken according to Custom, he rested very quietly that Night. The Humour was so sharp on the Arms and Legs, that it at length eat away the Pellicles in which it was included, whence arose a very filthy Smell. Therefore they were anointed all over in such a manner with Lamb's Sewet, that he seemed to have been embalmed.

On the *twelfth* and *thirteenth*, things much the same. These and the following Nights, he was at times a little delirous; and his feverish Heat continued.

On the *fourteenth*, his first Cathartick Medicine was given him: and since the Fever was not even then abated, it was again repeated on the *sixteenth*.

By this method of Cure the Fever at length entirely went off. But such was the acrimony of the Humours, that the Patient, even after he was recovered, was not only troubled with Boils, but his whole Skin in a manner scaled off, and he lost his Nails: and by means of these changes, his former Bloom was again restored.



## Case IV.

**T**HE going off of the Small-Pox, which we observed together on a certain Gentlewoman, was both very rare, and also exceedingly remarkable.

She had a full habit of Body, and for almost two Months was violently afflicted with a Cough and Catarrh. At my first coming to her, there was some appearance of the Small-Pox: so thick indeed, that as the Distemper encreased they adhered almost every where together. The Fever very violent. Her Breathing something difficult: her Voice hoarse: and she was sometimes troubled with a Nausea. But the pain in her Head was extremely violent. Things having been ordered her which might loosen the Belly, nine Ounces of Blood were drawn off, near the Neck, by Cupping-glasses. Nor let any one wonder, that, however the Small-Pox were even now coming out, I advised Bleeding: for at this very time, if the Humours should be exuberant, and the Pain continue violent, I have found a loss of Blood, and especially with Cupping-glasses, so little hurtful, that for the most part the Pustules come forth much the easier.

On the *second* Day, since her Cough was very violent, and her Breath still something laborious, she was ordered the *Decoctum Pectorale*; but that was so disagreeable to her Stomach

mach (which I have also at other times observed) that it generally created a Nausea.

On the *third*, things much the same: except that by taking of a *Linctus*, her Cough grew something milder; and by taking *Opiates* at several times, she obtained some Rest.

On the *fourth*, she complained much of a hoarseness and roughness of the Fauces: therefore her Mouth was oftentimes *gargled*. The Pustles came out in great Numbers: very small in size and depressed; as for the other Symptoms, there was hardly any thing of an ill prognostication. She Spit an incredible Quantity, so that in the space of four and twenty Hours it amounted almost to the measure of a Gallon. However, she was perpetually restless, and her tumbling about so continual, that it was necessary to have recourse again to *Opiates*. And these I indulged the more freely, because, as far as I could ever observe, I never found the swelling of the Face abated by them, or the spitting intercepted. At this time of the Disease especially they have a wonderful effect; since there is no Medicine more powerful, not only in procuring Rest, but also in gently throwing forth the Humours, and ripening the Pus. Even in this very Patient, where there was some difficulty of Breathing, it was so little injurious, that when the other Symptoms took a turn for the better, and the Spitting proceeded well, the Breath also was then less affected. A kind of Remedy almost divine! which that excellent Writer

upon this Distemper, *Sydenham*, first introduced into the cure of the *Small-Pox*, and which, by being judiciously and prudently applied, has undoubtedly recovered more Persons than the whole Class of Cardiacs put together. And among those which are so advantageous to the Diseased, that celebrated Medicine invented by *Fracaſtorius* deserves not the least regard.

By this Method, therefore, of proceeding she had a quieter Night : And on the *fifth* Day her Face became tumified ; the Pulse more settled with regard to the number of the Strokes ; the Urine however, tho' of a good Colour, had no Sediment. On the *sixth* Day she was much the same, except that she appeared fainter.

On the *seventh* she was very uneasy, sleepless and unquiet : The Fever returned now again ; the Matter which stuffed the Pustules very laudable, and something yellow.

On the *eighth* the same Inquietude ; so that she passed no Night without being obliged to take *Syr. de Meconio* ʒii, one of which was given very early in the Evening, according to *Sydenham's* Advice ; because then the Fever begins to rage. The Night, however, not more comfortable in the least.

On the *ninth* the Spitting proceeded as yet pretty liberally ; but the Fever was so violent that she was sometimes disordered in her Senses ; her Pulse quick, yet strong ; the Pustules on the Face began to dry up, and the Tumour a little



to subside; her Breath not so free; a large discharge of Urine. A Clyster being injected in the Morning the Fever was something abated. In the Evening a Vesicatory was applied to the Neck, and an hypnotick Draught given, according to Custom: Hardly any Rest in the Night, for she was very Hot and Delirious.

On the *tenth* in the Morning she was a little more composed to Rest; but neither yet free from her Fever or Delirium: However, the Clyster being again injected, she came something to herself. But in the Evening, when you, being called into Consultation, visited the Patient along with me, and the Fever was not yet allayed, because we found the Pulse however swift, yet full and strong, considering her Strength, we concluded she should take this Medicine immediately.

*R. Decoct. Sen. Gereon. ʒiiss.*

*Mannæ ʒfs.*

*Aq. Pæon. Comp. ʒiii. M.*

And we ordered a sleeping Draught to be given her after *two* or *three* Stools. In the Night she had *six* Stools; in such a manner, however, that she enjoyed some pleasing intervals of Rest. Hence every thing took a turn for the better: So that

On the *eleventh* the Fever was much abated, and the Delirium entirely vanished. There still remained, which is very rare, a very liberal Ptyalism. The Tumour of the Hands, which had been hitherto but small, encreased. So little does a mild evacuating Medicine pre-

vent the Limbs from swelling, even at this time of the Distemper, which is so greatly dreaded by the generality. Besides, in a noble Lady, as you may remember, who miscarried on the *eleventh* Day, and had a large profusion of Blood, the Hands not in the least inflated before, on the *twelfth* began first, after that profusion, to grow turgid ; so that in a few Days, altho' the *Small-Pox* were very numerous, and she Miscarried in the course of them, she was perfectly recovered.

On the *twelfth*, since the Fever still continued, a Clyster was again injected ; whereby the Belly becoming more open, she received very great relief ; for she had *two* or *three* Stools every Day till the *fifteenth*. When she had been gently purged with *Rhubarb* mixed with *Opiates*, repeated at times, after three Days her Heat entirely vanished with her Fever.

But that it may appear how great the *Virus* of the Distemper had been, when her Health was recovered, the variolous Matter entirely eat thro' the cartilaginous *Septum* of the Nose ; so that there remained no small Foramen, every way covered over with a Cicatrice. And this indeed, since it did no other hurt, must be esteemed very fortunate for the Patient ; for if that acrid Humour had settled higher upon the Bones, the Nose itself would have fallen.

## Case V.

A Lady who was gone about three Months with Child, was seized with the most exquisite Pains in her Head and Limbs; particularly in the Back they were as acute, as if she had been pierced thro' with a Sword. In like manner a Fever began to come on. The judicious Dr. *Chamberlen*, who attended her, altho' he perceived some danger of her Miscarrying, had yet some suspicion of the *Small-Pox*: Wherefore, that he might relieve both *Evils*, he ordered her to be blooded. The Day after, since every thing grew worse, he applied Vesicatories to the Arms; after that the *Small-Pox* came out in great numbers: Her Pains were something alleviated; but to the other Symptoms was added a Dispiritedness: Her Belly also something more open. Wherefore things were ordered her to recruit her Strength, and check her Looseness.

But on the *third* Day, when I was called into Consultation, her whole Body was almost covered over with the *Small-Pox*; distinct indeed for the most part, but so that there were the most minute distances between them; therefore, in the course of the Distemper, many of them ran together: Neither did the danger of an Abortion vanish; for the Fever was hardly any thing abated, and the Urine was sometimes tinged with Blood. The Pustules likewise came out exceeding slowly;



besides, she was troubled with a Cough, and oftentimes also seized with a Nausea.

The *fourth* Day was spent in the greatest Uneasiness: The other Symptoms much the same; wherefore a sleepy Medicine was given her in the Evening; and because she had but little Rest, it was repeated about Midnight. Nevertheless, about the dawning of the

*Fifth* Day she Miscarried; so unhappily, however, that the *Placenta* remained behind. In these streights therefore, we thought proper to restrain the profusion of Blood a little, lest the Pustules should entirely fall in; and we mixed *Opium* with some gentle Astringents. In the Evening therefore the Flux was pretty moderate; the Pustules, however, something palish: The Face, which had began to swell, was depressed; the Pulse quick and weak: Her Restlessness continued, and her Mind not thoroughly composed; her Fingers in perpetual agitation, she caught at the Bed-things and collected the Flocks. Finally, Her Strength was greatly decayed, so that she seemed to be in extream danger of her Life. However, using much the same Medicines, and especially taking two Grains of *Opium* at twice, she passed that Night tolerably well: So that in the Morning, by the means chiefly of this Medicine,

On the *sixth*, every thing was changed for the better, and there was some hopes of preserving her Life; for the Pustules began to rise again and grow florid; and her Pulse became

came so strong, that she seemed at this time not entirely free from a Fever: The same Remedies were given her, and for the same Intentions as before; for we judged it best to abstain from the *hotter* Medicines, lest the flux of Blood, which would have been of much worse consequence, should have encreased. The same Method of Cure in the *Small-Pox* was, I find, observed by *Sydenham*, when they were attended with the *Menses*.

On the *seventh* Day, therefore, since the apprehension of too great a Flux of Blood was now almost vanished, the milder *Cardiacks* were prescribed, and a very gentle Clyster was injected.

On the *eighth* the *Placenta* came away in a manner spontaneously; for imagining in this affair that Art might prove injurious, we left almost every thing to Nature. Some *Grumi* of Blood came away at the same time, but no Flux ensued which was hurtful.

Thus she reached the *ninth* Day. Her Face was very moderately swelled, the Pustules themselves not in the least dried, being, since they came out slow, still fluid with crude Matter. These three Days the Spirting was pretty liberal; her Cough still troublesome; the Fauces rough, and little Ulcers scattered over the Tongue. Her Fever continually remained, and her Delirium sometimes returned; her Pulse in the mean time sufficiently strong, and, however quickned, it continued in an equable Motion: There was likewise a great Sediment

diment in the Urine; but her Body was so restless and uneasy that she could get no Sleep, but by taking a sufficient quantity of Opiates.

On the *tenth*, all things in the same state.

On the *eleventh*, her Face dried: The Fever still continued, however it was something abated, by producing *two* Stools with the help of a *Clyster*.

On the *twelfth*, the same Restlessness and Fever; wherefore a stronger Clyster being injected she found some relief.

At length, on the *thirteenth* Day, seeing her Strength was pretty firm, and that her Fever was not yet gone off, half a Drachm of *Rhubarb* was given her; for we were confident that the Distemper, which had been abated by loosening the Belly, might be at last carried off chiefly by this method of Cure. After therefore that she had had four Stools her Fever was much alleviated. Which yet

On the *fifteenth* Day was so little vanished, that it was necessary to prescribe a Medicine something stronger. Which was as follows,

*Rx Decoct. Sen. Gereon. 3iiss.*

*Mannæ Calabrinæ 3ss.*

*Aq. Mirabilis 3iii. M.*

Which producing *five* Stools entirely removed the Fever.

Thus was that excellent Lady delivered from a manifold danger of her Life, more than once, by an uncommon Example. Inasmuch as that excellent Practitioner, who had the care of this Patient's Health, very rarely knew



knew any one recover, who Miscarried after being seized with the *Small-Pox* ; but of those who had Miscarried in this manner, he never knew one survive.]

### Case VI.

**T**HIS being a proper place, I shall annex the Case of a *Lying-in Woman*, as being very remarkable, and much like that which I have just now related ; especially since she committed the care of her Health to the same Physician. He being called in, and finding her seized with a very violent Fever, and a Pain in the Back, altho' her natural time of Delivery was almost at hand, He ordered her to be bled, as also a Clyster, and Vescatories to be applied. The next Day the *Small-Pox* came out in great numbers ; nevertheless they ran together but very rarely. From that time she complained less of Pain ; however, on the *third* Day she was delivered of a full grown Child. Nevertheless, by the advice of the Physician things proceeded so well, that the *Small-Pox* continued their course happily.

On the *seventh* Day, when I was sent for, I found apparent Tokens of the Fever's return ; for her Pulse was quick and great ; her Urine very pale, yet discharged in great plenty ; the Spitting very little ; the Face hardly any thing swelled ; the Pustules themselves whitish, and so empty of Matter that, for the most part, they resembled either a Pellicle or a Wart,  
a very

a very few were filled with a thin Serum, she passed the Nights with great difficulty ; however, she accustomed herself to *Opiates*. She seemed sometimes also to grow languid : therefore Blisters were applied below both Cubits, and Medicines were ordered which might create Rest, and propel and digest the Humours, if that could by any means be done. But,

On the *eighth*, tho' she had an easier Night, the Pustules were not digested, neither was the Swelling any thing encreased ; and the Fever was much more severe, with a great Restlessness of her Body. A *Clyster* being injected in the Evening opened her Body, whereby the violence of the Fever was a little abated.

On the *ninth*, every thing the same ; neither was there any maturation on the Limbs : She was extremely uneasy, and sometimes disorder'd in her Senses. This Day she found the same Relief by a repetition of the *Clyster*.

On the *tenth*, there appeared in no small number, between the Interstices of the Pustules, red Pimples, like the *Measles*, adhering, for the most part, within the Skin ; however, some of them were so far advanced outwards, that they resembled certain Tubercles : But in three Days time they entirely disappeared. Neither is this kind of Eruption new or unfrequent, or passed over in silence by Authors ; but seems to have been observed by *George*, the most ancient Writer in *Rhazes*<sup>a</sup> ; for, says

<sup>a</sup> *Contin. 30. 419. Col. 3. Vide etiam Mayern. de Variolis Gass. Kalichen, obs. de Variolis in Æthiope.*

says he, "it happens sometimes that small Pustules are found inwardly with those which are large, and are called the double *Small-Pox*." In like manner *Gometius* tells us <sup>a</sup>, That the *Small-Pox* often repullulate, as it were, and arise in a fresh Crop. Also *Etmuller* says <sup>b</sup>, That the *Small-Pox* have come out in one part of the Body, and the Measles in another. Thus the *Small-Pox* often succeed one another, and are sometimes found distinguish'd by verrucose, chrystalline and horny Pustules. But this *Lusus Naturæ* argues a crudity of the Humours, and intimates the Disease to be very violent.

But to return to our Patient: The Pustules on her Face fell off like Scales; the Fever remained continually; her Pulse pretty equal, but too quick; no Sediment in the Urine. Therefore since Nature could do nothing more of itself, neither throw off any thing more, either by the Passages of the Skin, neither by those whether of the Spittle or Urine, we judging it our Duty to assist the Patient under these Circumstances, by Art, gave her half a Drachm of *Rhubarb* without delay. However it brought away nothing. Wherefore in the Evening a Medicine something stronger was prescribed.

℞ Decoꝝ. Sen. Gereon. ʒiii.

Mannæ opt. ʒss.

Cremor. Tartar. ʒi.

Aq. Mirabilis ʒiii. M.

This

<sup>a</sup> *Ibid.* 903, <sup>b</sup> 248. *Pechlin, Observ. Diemerbroeck. Hist.* 19.



This being exhibited at twice, produced *four* Stools, to her great relief. But that the Medicine was thus divided, was indeed done by us designedly in this weakness of Body; for we judg'd it more proper, as *Celsus*<sup>a</sup> has likewise judiciously remark'd concerning Bleeding, first to ease the Patient, and afterwards thoroughly purge her, than to cast her down, perhaps, by exerting all its force at once. For by using this Moderation, hardly any Accident happens unexpectedly.

On the *eleventh* and *twelfth*, her Strength was something recruited, by taking *Cardiacks* joined with *Opiates*. Her Rest less interrupted than before. At length there was some Sediment in her Urine. Her Pulse not so quick: But neither yet, altho' there had been some Intermissions, did the Fever entirely leave her.

On the *thirteenth* therefore, much the same Purge being again repeated, what Fever remained was entirely extinguished.

I imagine these Cases of the *Miscarrying* and *Lying-in* Women not very common; in whom, as the Disease itself had much the same course and event; so this Advantage was also common to both of them, That their Distemper being conceal'd from them, neither of them perceiv'd she was seiz'd with the *Small-Pox*, until she was perfectly recovered.

You see one of them was thrown into the greatest danger of her Life, not only from her *Lying-in*, but from the very kind of the *Small-Pox*;

*Pox*; for the Pustules were either hard like Warts, or empty like Pods, and never acquired any Maturity : The latter of which are pronounced fatal by *Marcellus Donatus*<sup>a</sup>; and the former by *John of Gaddesden*<sup>b</sup>, the oldest physical Writer among our own Countrymen; both of them having copied after *Rhazes*<sup>c</sup>.

This Species of the Disease is indeed very rare : Of which, however, I cured a Girl not long since. The *Small-Pox* were exceeding thick upon her; the Fever at the beginning so violent as to occasion for *five* Days continually *Deliria*, Pains, Watchings, and distentions of the Nerves. After that time all things were quiet.

On the *eighth*, not the least remains of any Matter in the Pustules; and also no Tumour on the Face. Therefore I was then afraid, lest there should be any great danger at hand. However, on the next Day all the Pellicles broke and fell off: And, contrary to all Expectation, the Disease went perfectly off without any Fever. Nevertheless, after a few Days, it appeared there was some Matter still remaining in the Blood, from some Boils, which then plentifully broke forth.

<sup>a</sup> *De Variol.* III.

<sup>b</sup> *Rosa Anglic.* 2. 4.

<sup>c</sup> *Contin.* 30. *de Peste.* c. 15.

## Case VII.

**A** Youth about fifteen Years of Age was seized with a Fever, attended with a great Pain of the Head, and a very sharp flux of the Belly, so that in a short time the *Small-Pox* came out, crouded and contiguous. The judicious Dr. *Wadsworth* imagined the Patient might be greatly relieved if a Blister was applied to his Neck, and a *Tincture* made use of, which might check his Looseness.

On the *third* Day, when I was called in, the Pustules, altho' small, were yet pretty florid, and more advanced than could be expected, considering the Impediments; for the Belly was still open, so that he had *four* Stools or more every Day. Therefore by the frequent use of the *Tincture*, and other Remedies, as well Astringent as Cardiack, the Looseness was something abated. He was troubled with a Soreness and certain roughness of his Throat; his Tongue was also painful with the Pustules; which Evil was removed by a thin *Mucilage* made with the *Seeds of Quincies*. His Urine of no bad colour.

On the *fourth* in the Morning things much the same. The flux of the Belly was however encreased; so that we found it necessary to try some stronger Remedy: Which was as follows.

R *Decoct*



Rx *Decocti albi* 3vi.

*Confect. Fracast. sine melle* 3vi.

*M. F. Clyster statim injiciendus & rep. vesperi.*

But neither this way was his Belly so settled, but that it disturbed his Rest very often in the Night. Nevertheless,

On the *fifth*, The Pustules were neither pale in colour, neither were their Heads sunk in; but according to the nature of this Disease, happily advanced; his Strength likewise tolerably well settled: But he was very uneasy, and his Looseness occasioned fresh Difficulties: His Stools were very liquid, and resembled sometimes a Mucus and Phlegm: Wherefore the *Tberiaca* was mixed with Astringents, and a *Clyster* injected, which might more powerfully check the impulse of the Belly. A Draught also was exhibited in order to procure Sleep. At Night he was tolerably easy; so that

On the *sixth*, His Belly being more bound, his Looseness seem'd at last to be altogether staid. Wherefore setting aside the stronger Astringents, the *Tberiaca* was repeated; and we took the same care to promote Sleep.

On the *seventh*, however, every thing grew bad again; his Stools being much too quick: Nevertheless the Pustules were of a vivid Colour, and filled with a laudable Matter: Therefore we return'd again to those things which had been order'd on the *fourth* Day; whereby the Night was rendred a little easier.

O

On

On the *eighth*, no more disturbance from his *Diarrhæa*; nor any complaint except of some Faintness : Yet his Pulse was quicker; so that there were no obscure Signs of a secondary Fever. He therefore passed the Day with some Uneasiness. Wherefore supposing it to be our greatest concern, and that the Cure ought to be so carried on; that the Suppuration of the Pustules, which had hitherto been very slow, might be compleated, and the Patient have some Intervals of Rest, we judg'd it proper to continue the use of moderate *Cardiacks* and *Opiates*. And on the next Day every thing proceeded according to our desire.

On the *tenth*, the Pustules being suppurated began to dry up. The Fever was encreased, so that a very great restlessness ensued. We therefore ordered an emollient *Clyster*, and applied *Vesicatories* to the Arms. The hypnotick Draught was likewise a second time repeated in the Night, whereby his Sleep was something more quiet : Yet so that,

On the *eleventh*, His Pulse was too quick, and the Heat of his Body pretty vehement : However, there was some Sediment in his Urine. Therefore, since the Fever still continued,

On the *twelfth*, We gave him half a Drachm of *Rhubarb* without the least delay; which producing four Stools the feverish Heat was much moderated, which yet generally encreased towards Evening.

On

On the *thirteenth*, every thing in the same Condition. Wherefore,

On the *fourteenth*, the *Rhubarb* being again repeated, gave him *six* Stools. Hence he had a tolerable easy Night, and the remainder of his Fever entirely wore off.

You observe what hazardous Circumstances this Youth was in ; for a Looseness is placed, by all Writers, among the most fatal Signs of the *Small-Pox* : Of which the *Arabians* were so greatly afraid, that the generality of them not only diligently, but also officiously, guarded the Patients against it, by those things which were Astringent. Some of the *Arabians*<sup>a</sup> indeed were of a different Opinion, who would have the Body open on the first Days of the Distemper. Some order it to be loosen'd either daily<sup>b</sup>, or at least every other<sup>c</sup> Day, by the help of a *Clyster*, or a *Suppository*. Which Method of Cure, I am inform'd, is even at this Day, practis'd in some Parts of *Germany*. But yet I would not advise this Practice to be follow'd in the course of the Distemper, tho', at other times a Friend to *Catharticks*. This very Case sufficiently proves, that a Looseness may sometimes continue in the *Small-Pox*, even without destruction to the Patient. And it is worth observing, that tho' he was perfectly recover'd, the Disease was of a longer continuance than usual ; as it frequently happens when the Body is very open.

O 2

Case

<sup>a</sup> *Fil. Mesue, Contin. 421. c. 4. Serap. ib. de Febr. c. 12.*  
<sup>b</sup> *Sennert. 736.*    <sup>c</sup> *Ensec. Consilior. Tom. 1. 48. Horat. Aug. x. 18.*



## Case VIII.

A Man about thirty Years of Age fell into the *Small-Pox*, which so covered his whole Body, as well as Face, that they seem'd every where to adhere; and in some few places were run together. But as he was otherwise moderately strong, he reach'd the *eighth* Day without any great Disorder. Then in the Evening his Breath was a little more difficult, Senses grew heavier, and his Mind something disturbed. To which were added an Inquietude and Heat of Body. The Pustules were almost dried up. He was diligently attended by Mr. *Hollier*: But this Gentleman was prevented following his own Method of Cure, by a certain *Frenchman*, who obtruding an infallible Medicine, made chiefly of *Salt of Vipers*, boasted much of the Patient's Security. However,

On the *ninth*, his difficulty of Breathing was not gone off, and his Delirium was violently encreased. Therefore in the Evening Vesicatories were applied to the Neck and Arms; and a sharp *Clyster* being injected produced several Stools. Whereby,

On the *tenth*, his Breath became easier, and his Head was something reliev'd.

But on the *eleventh*, the Fever was encreas'd; so that he was troubled at times with a Delirium, and a very great heaviness of his Head, and appear'd generally to be fast asleep.

In

In the mean time his Tendons were convulsed; his Body was extreemly Hot; and his Breathing also something difficult. His Pulse was, however, both full and strong. Therefore since he seemed to be in imminent danger, we were of Opinion, that he ought both to be blooded, and likewise purged in the following manner.

*Rx. Decoct. Sen. Gereon. 3 ii.*

*Syr. de Rhamno Cathartic.*

*Aq. Paon. C. a a 3 iii. M.*

It being objected, that such kind of Remedies were extreme, it was answered, that indeed they both appeared so, and were so, and that the Danger, which we would prevent, was likewise extream. Wherefore Blood being then taken away brought immediate Relief; and the Belly being often moved in the Night, the Heaviness of his Head and Breast was so entirely removed, that his Fever seem'd now also to be abated. Thus by the continu'd use of Remedies he was at last perfectly recovered.

### Case IX.

**T**HE Heir of a most noble and very ancient Family was seized with the *Small-Pox*; so mildly indeed that they came forth without almost any disorder: Therefore in the beginning nothing was done to relieve the Distemper, except taking away four Ounces of Blood with Cupping-glasses. The Care of him was committed to the celebrated and

learned Sir *Hans Sloan*. Thus he reached the *eighth* Day without any difficulty ; so that there was no suspicion in the least of his falling at any time into danger. However, on that Day, when we first visited him together, we found him both seized with a Fever, and oftentimes troubled with a Hiccough : He was also seized with a Cough. The Pustules were crowded not only on his Face, but also over the whole Body ; particularly from the Breast down to the Navel they were extream thick ; which, as it is very rare, so it is not without reason plac'd by some among the bad Signs : Neither is it a thing uncommon, that the *Small-Pox*, tho' they broke out very easily at the beginning, as in this Case, should in the decline of the Distemper prove fatal. The Margins of the Pustules were excessive red, and the Pustules themselves filled with a crude Matter, which inclined indeed a little towards a yellowness : The Face was but moderately swelled : The Pulse fuller, tho' quick : No great Inquietude, however his Sleep was neither sound nor long. The Spitting much too small for the violence of the Distemper : But his Strength was so languid that he did not care to have his Head raised from the Pillow, or to be turned from one side to the other. That some regard might be had to these Particulars, we order'd him some of the milder Cardiacks, and other Remedies.

On the *two* following Days no change of Circumstances, except that the *Singultus* was gone



gone off. Hypnoticks were given every Night, and sometimes also repeated.

On the *eleventh* his Cough was greatly encreased, and brought on a certain straitness of the Chest. His Fever also encreased, especially in the Evening. Therefore pectoral Remedies were prescribed him, and a Vesicatory applied to the Neck.

On the *twelfth*, the Belly being loosened with Cardiacks, the Fever was something abated; which yet return'd in the Night, so that it occasion'd a Delirium by Intervals.

On the *thirteenth*, his Face was wholly crufted over, and not the least Tumour on his Hands. His Breath something difficult: Neither was the Fever yet mitigated, or the other Symptoms abated. The Urine however, altho' discharged in large quantities, deposited some Sediment. Therefore deliberating seriously of the Matter, we had some discourse about *Evacuants*, and of giving some *Rhubarb*. However, judging that we ought to proceed leisurely at this time of the Disease, tho' dangerous, we laid aside that design. In which case our chiefest Care was, while we attended Nature's Endeavour, not in the least to injure the Patient: And we thought also, we were oblig'd to consult our own Reputations, as much as possible. Perhaps too it was prudently enough done of us to be unwilling either to try any Experiment, or to run any hazard by our Conjecture in so illustrious a Person, lest we should seem, if we

had not sav'd him, to have kill'd him : For if any Accident had happen'd, it might, perhaps, have been imputed to the *Rhubarb* ; but if the Affair should be brought to a Conclusion by a decent and customary repetition of *Bohus* and *Fulep*, we should have pursu'd the Rules of Art. Nevertheless we ventur'd to prescribe a *Clyster* a second time, and Veficatories were apply'd to both Arms. The Night restless; the Fever had never been so violent before : He talked much, and very often wildly : The Pulse both quicker and weaker. Therefore, in the Morning,

On the *fourteenth* Day, we determin'd to try what relief might be had in this danger from Cupping-glasses : These being therefore apply'd, eight Ounces of Blood were taken away ; whereby his Heat was something abated, and his Head greatly reliev'd. In the Evening, however, since the Fever was as yet little abated, and we, at length, imagin'd that Evacuations would be particularly serviceable, mention was again made of *Rhubarb* ; one while *fifteen* Grains were proposed, another while *five and twenty* : But judging it safer to proceed the middle way, we divided the Matter very equally ; and *twenty* Grains being at last given him, we had no occasion to fear too great a flux of the Belly. This producing *one* Stool, the Fever, however it seem'd now first to abate, yet still continu'd. Wherefore, lest the Delirium, or the difficulty of Breathing should encrease, we order'd Blisters to be kept in readiness.

On

On the *fifteenth* Day things appear'd something better : The Pulse was more equable : There was now no straitness on his Breast ; however his Voice was very hoarse. His Body was open'd by the injection of a *Clyster*, which being then more inclinable to a Flux, this Day and the next he had *three* or *four* Stools. His Strength, however, unless at the very time of going to Stool, in no wise diminished.

On the *seventeenth*, we advanced boldly to *half a Drachm* of *Rhubarb* ; whereby he had *three* Stools. But neither yet was the Fever entirely gone off, which, in the Evening especially renew'd the Disorder. The other Symptoms were indeed changed for the better. Therefore,

On the *twentieth*, since he had every Day a Stool, *twenty five* Grains of *Rhubarb* were exhibited. The Fever was now entirely carried off ; and his Strength (altho' his Belly being now looser he had generally *two* Stools a Day for some time) gradually encreas'd.

By these means was that noble Person, at length, recover'd from a most violent Distemper by slow degrees : And that this Cure ought to be ascrib'd to Evacuations, and indeed chiefly to the flux of the Belly, is sufficiently prov'd from the Relation itself : For the Fever did not go off until the *Purging* had been gently indeed, and that several times, repeated.



## Case X.

**A** Delirium is pretty common, either at the beginning or the heighth of the *Small-Pox*; but I scarce ever saw it so unruly as in a certain Virgin: The *Small-Pox* came out unseasonably, namely, on the *second Day*; they were indeed very numerous and thick; so that they ran plainly together on the Cheeks. Dr. *Pigot*, being her Neighbour, attended her; who took great care that the Pustules should both come out and advance very happily. On the *fourth Day*, therefore, they were both large in bulk, and also of a florid Colour; but she had no sleep for two Days; wherefore her Mind was in a short time disturbed, so that she entertain'd vain Imaginations, and very melancholy Thoughts: She did not rave in her Talk, but threw herself about so violently that she could not easily be held. Her Pulse was pretty quiet that Day, but her Body vehemently heated; and she often cried out, that she was as it were burnt with a Fire. Veficatories were order'd, and other Remedies which were proper both to encrease the Pustules and procure Rest. But these Assistances were unsuccessful in procuring Sleep. Therefore her raging Fit still continu'd the same, and much resembled that of a Mad-Woman. The other Symptoms proceeded much according to desire,

On the *seventh* she had some little Rest; her Mind, however, was still troubled with vain Imaginations. The Pustules proceeded not ill; and she was hitherto, if we might judge by the Pulse, generally free from a Fever, but some burning Heat seem'd to lie lurking within; so that she had a continual Drought, and her Jaws were so dry, that the course of her Spitting was entirely cut off.

On the *eighth*, since the Matter in the Pustules seem'd now tending to a Suppuration, the Pulse being quickned, shew'd that the Fever was come on according to custom. The Pulse, however, was both strong and full. She had no difficulty of Breathing, but neither had she any Rest: Nor was her Delirium any thing abated. In the Urine nothing appear'd digested.

On the *ninth*, every thing almost the same, except that both the Fever and Delirium rag'd more violently. Therefore a *Clyster* was injected; by which the Belly being loosened, she enjoy'd some short space of Rest.

On the *tenth*, the Pustules were indeed filled with Matter, but that extremely indigested. The same disorder of Mind; and the Fever brought to an extream degree of Heat. She was seiz'd also at times with distensions of the Nerves. Wherefore, about nine Ounces of Blood were taken away by the help of Cupping-glasses; whereupon there was some, tho' very small abatement of the Fever. The Tendons were now also compos'd,

On

On the *twelfth*, things took a turn again for the worse : But neither yet were the Pustules wholly dried, neither was the Tumour of the Face diminished ; and the Heat of the Body was very intense. Half a Drachm of *Rhubarb* being now taken, just open'd the Body ; wherefore it was purged the next Day by a Medicine something stronger : Upon that she gain'd some Sleep, which was, however, obtain'd with such difficulty, that the *Opiates* which were given her were generally unsuccessful. A Case which is often experienc'd in other violent *Deliria*. The Fever still continu'd with the greatest disorder of Mind. Therefore,

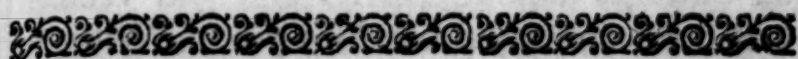
On the *sixteenth*,  $\text{ʒii}$  of *Rhubarb* were order'd her ; and repeated again on the *seventeenth* ; so that she had several Stools : But neither thus was the burning Heat of her Body extinguish'd or the Delirium abated. Therefore,

On the *nineteenth*, Leaches being applied to the temporal Veins drew away much Blood. Hence her Head was greatly reliev'd ; which, however, was yet so unsettled, that her Delirium now and then return'd : Neither was the Fever yet ceased. Wherefore,

On the *twentieth*, a gentle purging Potion being exhibited, and within *three* Days repeated, her Fever was so abated, that after *four and twenty* Days her Mind was at last settled. And after that, by using the *Asses-Milk*, in order to remove her feverishness she,



she was, in a short time, perfectly recovered.



Thus you see, how unlike the course of the Distemper is, even in the same kind of the *Small-Pox*, and how various the nature of the Symptoms is, and plainly dissimilar : You see Patients of both Sexes, in all kinds of Weather, of every Age, every Habit, and at every Season of the Year, labouring under the same Distemper, who were, however, all deliver'd from the utmost danger of their Lives by this particular Method of *Purging*. You see how sudden and unexpected a Relief some gain'd by *Purging* ; how others were gradually reliev'd, by repeating it at due distances ; how all of them, sooner or later, were recover'd in a wonderful manner. For were not all these Patients deliver'd, as it were, from the Jaws of Death by this Remedy ? Some indeed, as it were, at one Stroke, were deliver'd at once : Many were extricated by degrees, and very slowly ; so that if any one should think their Recovery ought not to be ascrib'd to *Purging*, the same Person may with equal Reason contend, that there either never was such a thing as the Art of Physick, or that Medicine never did any one any Service. However, these notorious and remarkable Instances were not invented by the Imagination of Idle Men, but deduc'd

deduc'd from repeated Experience, the Mistrefs of Art ; not coined secretly in Corners, and in Cottages among Nurses and old Women ; but done and prov'd before proper Witneffes, in the face of all Mankind, and for the moft part within the Walls of the Nobility.

But, fay they, this Method of Cure is new and unheard of, oppofite to that of the Ancients, and now firft deliver'd by us. You know, whatever be the Praise of it, how little we arrogate it to ourfelves : And I have declar'd, in another place, by what Authority we were induc'd to do it. But that we may be the better enabled, either to fhun the Glory as Inventors, or decline the Envy as Innovators, the Reader will not take it ill, if we fhould trace this Argument farther back to the Original. Neither will it be much amifs, at this time efpecially, if I fhould both purfue this Diftemper up to its firft Original, and add fomething likewise in a few Words, about the moft ancient Writers upon this Subject, which may not be univerfally known. Which I the more willingly undertake, becaufe their feveral Times, as they are hitherto mark'd in Authors, are not only falfe, but alfo greatly confus'd. Neither is it fo furprifing, that fo many Fables, and fo great obfcurity is found in the relation of thefe Matters, fince the Writers have met with no proper Author who has deliver'd in an explicit order, the feveral Ages of the *Arabian* Phyficians : but, at length, thefe Clouds were firft difpell'd by

the

the learned *Pocock*, by publishing *Abul Pharajio* <sup>a</sup>, who was no mean Physician nor Historian <sup>b</sup>. Wherefore, what I find to have been hitherto unobserved by any one, as far as it relates to my Subject, I shall briefly consider, that we may learn in what Age the *Small-Pox* was first known, as far as it is clear from History.

The *Small-Pox* therefore, tho' their rise is perhaps obscurer, than is commonly imagined, seem however to have taken it, even, from the *Arabian Empire*. For those who contend that they were known to the *Greeks*, even the most ancient, plainly trifle : Since those very Writers who were the most accurate in relating the Signs of Diseases, have not said one Syllable about them. Neither am I ignorant that *Rhazes* <sup>c</sup> himself, in his own, not in *George's* Decretal, (as *Sebizius* would have it <sup>d</sup>) has affirm'd, that *Galen* has not omitted them, and that he has delivered their proper Cure : Which Places of *Galen* I have neither with *Diomedes Amicus* found hitherto ; neither do I imagine, that they can any ways relate to the *Small-Pox*. However, *Rhazes*, who has inserted into his own Work, many Writings of the ancient *Arabians*, only shews, that this Disease was very well known several Ages before his own Time.

The oldest Person, therefore, who it is certain has said any thing about the *Small-Pox* is  
Aaron

<sup>a</sup> *Vixit. A. D. 1284.*  
4. 420. 2.

<sup>b</sup> *Oxon. 1663.*

<sup>c</sup> *Contin. 419.*

<sup>d</sup> *De Variol. Disp. 2. Q. 1.*



*Aaron* a Priest, often mention'd by *Rhazes*, born at *Alexandria*, where Learning, and particularly Physick had flourish'd, even from the Times of the *Ptolemies*; who being famous in the Reign of *Mahumed*, A.D. 1622. or about the beginning of the *Hegira*, compos'd thirty <sup>a</sup> Books of Physick, as it is said, in the *Syrian* Language. This Writer has both deliver'd the Signs of the *Small-Pox* <sup>b</sup>, and explained the times of the Eruption<sup>c</sup>, and marked the several kinds whether safe or dangerous<sup>d</sup>: and seems also to have partly handled the Method <sup>e</sup> of Cure. For he says, when once the Eruption is over, that we must abstain from things which are cold; he advises the Juice of *Apium* and *Feniculum*, the better to bring forth the *Small-Pox*: lastly, he describes a Medicine to prevent any accident happening to the Mouth, Jaws and Eyes. So that the *Small-Pox* seems first to have taken its rise, as far as we can collect from Monuments, in *Aegypt*, perhaps, the Country of *Aaron*, and which frequently produces a *Pestilence*: and which then, when *Alexandria* was taken by *Amron*, and forced from the *Greeks*, was easily spread among the *Arabian* Nation. And it may be proved that the *Small-Pox* did not exist, even in *Greece*, much before the time of *Aaron*, from *Ælius Amidenus*, which the foregoing Age shews; for he, tho' he study'd Physick in the same *Alexandria* <sup>b</sup>, and collected every

<sup>a</sup> *De Variol.* c. 10.    <sup>b</sup> *Abul-pharaj.* p. 99.    <sup>c</sup> *Ib.* *Haly Abbas Theor.* c. 1.    <sup>d</sup> *Contin.* 419. 2.    <sup>e</sup> *Ib.* col. 4.    <sup>f</sup> 422. 1.  
<sup>z</sup> *Ib.*    <sup>h</sup> *Tetrabib.* 1. 1. *Ol. Cyzicen.* & *Ol. Salca.*

every thing he could together relating to Physick, makes no mention at all of them.

About the same time, near the Death of *Heraclius*, in the Year 641, *Paulus Aegineta*<sup>a</sup> illustrated Physick, or rather contracted the Volumes of the Ancients, particularly *Galen*: He was remarkably skill'd in the management of Womens Distempers, whence he gain'd the Name of a *Man-Midwife*. Therefore he both begins his own Books of Physick, as you may observe, with the Diet of *pregnant Women*, and generally enlarges more in the disorders of *Women*<sup>b</sup> than any others. He was a great lover of travelling: Yet since that diligent Writer, as he seems to have been, professes<sup>c</sup> that *he has not omitted one Disease*, and has not mention'd one word of the *Small-Pox*, it is no small Proof, that they were not only unknown to the older *Greeks*, but that they were also not yet known even in his own Time.

Some Years after this, *A. D.* 683. lived *Masferjawaibus*, a *Syrian*, and a *Jew*, and in the Opinion of *Rhazes*, an understanding Physician: He, in the Reign of *Merwan*, made an *Arabick*<sup>d</sup> Interpretation of the Pandects of Physick, writ by *Aaron* the Presbyter. There are some of this Man's Writings to be met with, wherein he has deliver'd a Cure for *Sore-Eyes* occasion'd by the *Small-Pox*<sup>e</sup>.

And that the *Small-Pox* were sometimes fatal, even at this Time, among the *Arabians*,  
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<sup>a</sup> *Abulpharaj*. 114.

<sup>b</sup> *Abulpharaj*. 127.

<sup>c</sup> *Lib.* 3 & 6.

<sup>d</sup> *Contin* 421. 3.

<sup>e</sup> *Præfat.*

we learn from History <sup>a</sup>, that *Alsaſſab* the Chaliph died of this Diſtemper, A. D. 753. Some time after, *Almanzor*, deſcended from the Houſe of *Abbas*, enjoying the Government, was a great encourager of Learning; and when he was very ill with a Diſorder in his Stomach at *Bagdad*, a City which he had newly built, ſent for *George* an eminent Phyſician of *Fondifaſabur*, and who was well ſkill'd in the *Persian* and *Arabian* Tongues. This *George* wrote ſomething concerning the *Small-Pox*; and has clearly enough explain'd at what Seaſons<sup>b</sup> they uſ'd chiefly to rage, and by what Marks<sup>c</sup> they might be diſtinguiſh'd. He likewiſe added ſomething about their Preſages.

About the Year 795, *John*, the Son of *Mefue*, a Chriſtian and a *Syrian*, a Man of Wit and great Reputation, open'd a School at *Bagdad*<sup>d</sup> with great Applauſe. Therefore, that Age produc'd a great number of Phyſicians. This Perſon undertook to explain the Writings of the ancient Phyſicians, at the Inſtigatation particularly of *Raſhid* the Caliph, to whom he was Phyſician, as well as to his Succeſſors, down to the Times of *Almotawacelus*; with whom he was in great Eſteem; and at length, not till about the Year 846, died in an advanc'd Age. He compoſed many Books, but as *Haly Abbas*<sup>e</sup> obſerves, without any order; wherein he has deliver'd ſome Precepts concerning the *Small-Pox*; for, beſides

<sup>a</sup> *Abulpharaj*. 139.

<sup>d</sup> *Abulpharaj*. 153.

<sup>b</sup> *Contin.* 419. 2.

<sup>c</sup> *Theor.* c. 1.

<sup>e</sup> *Ib.* C. 1. 3. & 4.



sides that he order'd the same things to the Eyes as *Aaron* did, and affirm'd, the Belly<sup>a</sup> sounding like a Drum was a bad Sign. He made a wonderful Medicine, as it is call'd, for removing the Scars of the *Small-Pox*, and first describ'd that celebrated Decoction of *Lacca* and *Lentiles*<sup>b</sup>. He order'd the Belly also to be loosen'd with *Aqua Fructuum*, if needful, till the *seventh* Day. But his Writings are now grown so very scarce, that they are hardly to be met with : For *John* of *Damascene* called also *Mesue*, whose Works we have, was a very different Person, and much more modern than him we have been talking of.

But almost all the same things which are deliver'd by *Mesue*, concerning the *Small-Pox*, are treated of by *Serapion*<sup>c</sup>, who added this likewise, that Blood ought to be let at the beginning, either by opening a Vein, or applying Cupping-glasses. He added likewise some other Lenitives to those prescrib'd by *Mesue* : For it is to be remark'd, that those things which have been now taken from *Rhazes*, may be found also deliver'd much in the same Words in that Treatise of *Fevers*, which is reckon'd to be *Serapion's*. *Haly Abbas* finds fault with *Serapion*<sup>d</sup>, for not having well explained the *Small-Pox*, its Signs and proper Method of Cure, and inserting it among Abscesses. Which Fault, however, *Haly Abbas*<sup>e</sup> is guilty of

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<sup>a</sup> *Contin.* 421.  
<sup>b</sup> *Theor.* c, 1.

<sup>b</sup> *Ib.* 4.  
<sup>c</sup> *Ib.* 8, 14.

<sup>c</sup> *Contin.* 421, 1, 1, & 4, 425.

of himself. Tho' *Serapion* was older than *Rhazes*, it is very uncertain at what time he liv'd; for they who tell us he flourish'd in the Reign of *Leo Isaurus*, about 730, are widely mistaken, for I can find no authority for them to build on.

To old *Mesue* succeeded a young Man, *Isaac*, the Son of *Honain*<sup>a</sup>, born at *Hira*, (which *Honain*, because he had happily translated several physical and mathematical Books, was called, by way of eminence, the *Interpreter*) and Grandson of another *Honain*, called also the *Interpreter*<sup>b</sup>: He himself being also excellently skill'd in the *Greek* Tongue, and much given to the study of Philosophy cultivated Physick very much in the Time of *Almatowacelus*. He publish'd many Writings of the Ancients, after the example of his Family, translated as well into *Syriack* as *Arabick*. This indeed was an excellence natural to his Family: So that it is to the Physicians brought up under their Discipline, that we chiefly owe the *Arabick* Versions of *Hippocrates* and *Galen*. But *Isaac*, as far as we can learn from *Rhazes*, treating of the *Small-Pox*, has advis'd nothing but Bleeding, almost to a Faintness; a Ptisan and binding of the Body, if it should be too open. Perhaps this is the same Person who is call'd the *Israelite*, and who wrote that little Piece of *Fevers*, which was translated into *Latin* by *Constantine*, a Benedictine Monk of *M. Casino*, and who was a very great Encourager

<sup>a</sup> *Abulpharaj*. 171.

<sup>b</sup> *Ibid*. 163. *Herbelot in Honain*.

rager of the School at *Salernum*. For this *Isaac*, whom we are treating of, being a *Christian*, descended from the *Ebadii*, who being, perhaps, originally *Jews*, made up of divers Tribes, retired into some Forts <sup>a</sup> in the neighbourhood of *Hira*. But *Isaac*, whether him we have mention'd or another, discoursing of *Fevers*, has settl'd <sup>b</sup> four kinds of the *Small-Pox* suited to the four Humours; and contenting himself to deliver their Signs before the eruption of the Pustules, has entirely omitted any mention of their Cure. To this *Isaac* is likewise ascrib'd a Work entitl'd, *Pantechni*; which, by others, is referr'd to *Haly Abbas*, under the Title of *Complementum Medicinæ*. And it is certain, as *Symphorianus Campegius* <sup>c</sup> has remark'd, that there are many Passages in *Haly Abbas* exactly the same, both as to Chapters and Words, with what are quoted in *Rhazes* under the Name of *Isaac*. But we shall say more of this Writer in his proper place.

Next to him, in the Times of *Almoctaphus*, A. D. 900, follow'd *Joseph Alsaber*, otherwise called *Vigilator*, a Man of remarkable Learning and Reputation, who with great diligence collected every thing relating to Physick. But it is plain, that he has deliver'd hardly any thing relating to the *Small-Pox* <sup>d</sup>, but what was taken from *Mesue*.

P 3

This

<sup>a</sup> *Ibid.*  
*Turinum*,

<sup>b</sup> *De febr. lib. 2. 27.*

<sup>d</sup> *Cont'n. 420. 4.*

<sup>c</sup> *Epist. ad And.*



This is, for the most part, what *Rhazes* has extracted from the *Arabian* Writers relating to the *Small-Pox*; who, as *Haly Abbas*<sup>a</sup> observes, has collected in that great Work, which is call'd the *Continet*, the Sentiments of all the Physicians, as well ancient as modern, from the Time of *Hippocrates*, to that of *Isaac*. There are other Physicians also quoted by *Rhazes*, who, tho' their Ages are unknown, have treated of the *Small-Pox*, viz. *Judeus*, *Tabri*, *Tarmadi*, *Bugajesu*, among whom *Judeus* is pretty ancient, as having been mention'd by *Serapion*, who is older than *Rhazes*. Neither is he a contemptible Author; as having first describ'd the two kinds of the *Small-Pox*, namely, the *distinct*<sup>b</sup> and *confluent*. He likewise shew'd the Marks<sup>c</sup> by which they might be distinguish'd from the *Measles*. Lastly, He has advis'd those things in the course of the Distemper, which may both hasten the eruption of the Pustules, and prevent their striking in by a gentle Astriction<sup>d</sup>.

Thus far I have drawn up the History of the *Small-Pox*, as well as I could, from the Fragments of the old *Arabians*, which are only to be found in the great Work of *Rhazes*, being at the same time assisted by *Abul-pharajus's* Chronology. You see, as it were, in a rude Draught, with what Success the first Lineaments of this Distemper are struck out; but the

<sup>a</sup> Theor. c. I.

<sup>b</sup> *Ib.* 421. 4.

<sup>c</sup> *Contin.* 419. 2.

<sup>d</sup> *Ib.* 4.

the Form itself is neither drawn enough according to the Life, nor brought near the Truth. There are many fine Strokes indeed, but nothing perfectly finish'd. We shall, perhaps, find a Piece something more finish'd by *Rhazes*.

*Rhazes* therefore flourish'd about the Year 900; for having arriv'd to the Age of *Eighty*, and lost his Sight, he dy'd in 932. Many will have him to have been a *Moor*, and to have dedicated his Books of Physick to *Almanzor*, Governour either of *Corduba* or *Africa*. But *Rhazes* was not born in *Mauritania*, but at *Rei*, a City in the Province of *Chorasan*<sup>a</sup>, and from thence had his Name; neither was that *Almanzor* Lord of *Africk* or *Corduba*, but this *Chorasan*<sup>b</sup>; being probably a Vicegerent of the *Saracen* Chaliph. He was deeply skill'd, according to those Times, in all sorts of Sciences, in Philosophy, Astronomy, and Musick, as well as Physick: Who, tho' he was greatly conversant in Practice, (from whence he had the Name of *Experimentator*) and had the care of the Hospitals both at *Rei* and *Bagdad*, was yet continually Reading and Writing<sup>c</sup>. Wherefore also he both collected and compos'd many things concerning the *Small-Pox*<sup>d</sup>; especially in that Work<sup>e</sup> wherein he has compil'd the Commentaries of all the preceding Writers; which Work, *Haly Abbas*<sup>f</sup> tells us, *Rhazes* drew up for his own private use; and that,

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even

<sup>a</sup> *Abul-pharaj*. 191. *Herbelot*.<sup>b</sup> *Rhazis* *Pref. Antidot.*<sup>c</sup> *Ibid.*<sup>d</sup> *Divis*. 159. de Febr. c. 18.<sup>e</sup> *Lib*. 50. Tr. 13.<sup>f</sup> *Theor*. c. 1,

even in his Time, it was very scarce. He has besides explain'd <sup>a</sup> the Course and Cure of the *Small-Pox*, in a particular Book, which a *Greek* Interpreter translated from the *Syrian* Tongue, and which *Georgius Valla* first translated from the *Greek* into *Latin* : And has diligently remark'd what is to be done both in the *distinct* and *confluent* kinds of them. Neither has the suspicion of *Augenius* <sup>b</sup> any foundation, that this Book was not writ by *Rhazes*, but the *Greek* Interpreter : Since *Rhazes* himself, in his Treatise of *Fevers* <sup>c</sup>, refers his Readers, more than once, to this Piece. *Augenius* is likewise mistaken, when he says, that *Rhazes* is not consistent with himself, in what he deliver'd in this Work and the *Continent* ; inasmuch as he has in both places, inserted almost the same Words concerning the *change of Age*, in which he is very large. But what he has produc'd out of the *Continent* <sup>d</sup> relating to the *Blactia* and the *Small-Pox*, do not belong to *Rhazes*, but to *George*. Therefore *Rhazes*, who was indeed an intelligent Writer, has fully explain'd to us, the Idea he had of the *Small-Pox*, as well in this Discourse of the *Pestilence* as in the *Continent* itself : So fully and copiously indeed, that very few things seem wanting either towards establishing the Signs, or forming the Prognosticks, or also rightly managing the Cure, in the *first* Stage at least. From this Fountain the *Arabian* Ma

<sup>a</sup> *De Pestilentia.*<sup>d</sup> *Contin. 420. 11*<sup>b</sup> *De Febr. 9. 13.*<sup>c</sup> *De Pestil. c. 1.*<sup>e</sup> *C. 18.*<sup>f</sup> *419. 4.*



Masters, who succeeded him, seem to have drawn every thing relating to the *Small-Pox*. For my part, I herein deliver my own Opinion; but we must be determin'd by Authors. For neither has *Haly Abbas* the *Persian* added any thing to *Rhazes*, however he detracted from his Reputation. He was indeed a Man at that time esteem'd very learned; and therefore had the Title of *Magus*. About the Year 980 he wrote his *Almaleci*, or the *Royal Work*, which he dedicated<sup>b</sup> in very hyperbolical Language, as was the fashion of the Eastern Countries, to the Chaliph *Ada-dodaula*<sup>c</sup>. This Book, however, is cried up by the Author himself, as the first Book among the *Arabians*, which takes in the whole Body of Physick: And it certainly deserv'd to be preferr'd before the *Canon*<sup>d</sup> of *Avicenna*; for if you regard the Precepts of Cure, it is much superior to the *Canon* itself. Wherefore, in the Year 1127, *Stephen* of *Antioch*, with much pains, translated this Book into *Latin*; tho' others, as we have observ'd, will have this Work to have been written by *Isaac*. Besides, *Avicenna* himself, who was born in 980, at *Bokhara*, and died in 1036<sup>e</sup>, has wrote nothing of the *Small-Pox* which he did not take or pillage word for word from *Rhazes*; unless what he says about *bloody Urine*<sup>f</sup>, and his *wonderful Prescription*, as it is called, of *Syrup of Dates*.

<sup>a</sup> Theor. 8. 14. Practic. 4 & 5.

<sup>b</sup> Theor. 1. 1.

<sup>c</sup> Abul-pharaj.

<sup>d</sup> Ibid.

<sup>e</sup> Pocock in Abul-pharaj. de

Maribus Arab. 362.

<sup>f</sup> De Febr. c. 6. & 10.

<sup>g</sup> Ibid. c. 70.

*Dates.* And, to say the truth, that *Syrup* is wonderfully compounded of many, and those very different Ingredients. And indeed, so much more unjust to *Rhazes* is that Writer to be reckon'd, who often wounds him secretly, from whom he has borrowed so much. However, such was the fortune of *Avicenna* (not unaptly stil'd the *Prince*) that when *Rhazes* was neglected, and almost forgot, (I speak of the *Small-Pox*) he continued his Empire in the Schools of Physick for several Ages. Neither is he the only Instance of a Person pillaging the Writings of other Men in a barefac'd manner, or more decently Epitomizing them, who has sometimes obscur'd the lustre of the genuine Author.<sup>1</sup> Whence *Gentilis Fulginas* was so bigotted to *Avicenna*, that he judg'd him to be not only a better, but also an Author much ancients than *Rhazes*; and affirm'd, that *after him*<sup>a</sup>, *Rhazes* had wrote with some Skill concerning the *Small-Pox*. But in what Rank *Rhazes*, however slighted, is to be placed, is abundantly shewn by that excellent Writer among the *Arabians*, *Alfaharavius*, Contemporary, as some will have it, with *Averrhoës*<sup>b</sup>; for he, altho' he has never made any mention of *Rhazes*, has yet follow'd him in almost every thing; so diligently indeed, that he has transcrib'd<sup>c</sup> those very Chapters, *verbatim*,

<sup>a</sup> *Comment. Avicenn. c. 6. de Variol. sive A. D. 1198. Pocock Ibid. 385, Partic. 2.*

<sup>b</sup> *Ob. A. Heg. 595.*  
<sup>c</sup> *Prætic. c. 104*

*verbatim*, wherein our Author has deliver'd the Cure of the *Small-Pox* <sup>a</sup>.

In like manner *Averrhoës*, and who was something older than him, *Avenzoar*, both *Arabians*, tho' born in *Spain*, seem to have produc'd nothing new upon the Cure of the *Small-Pox*. And yet the contagion of the *Small-Pox* seems at that time so to have spread itself, even thro' the Nations of *Europe*, that there was no Distemper more popular: And if any one escap'd free, it was look'd upon, according to *Avenzoar*, as a Miracle.

I doubt you will think me tedious in dwelling so long upon these horrid and almost obsolete Monuments of the *Arabians*: But because the *Small-Pox* had its first rise among the *Arabians*, and is almost the only Distemper whose History they have not borrow'd from the *Greeks*, I was willing to explain a Matter thus intricate, and not clearly enough known; so that by laying down the order of Time, every thing might be seen in one view.

Therefore, that we may now return from whence we digressed, let us enquire into the Opinion of *Rhazes* concerning the Method of Cure, particularly at this time of the Distemper. He therefore, tho' he forbids loosening the Belly, when the Distemper is not yet at the heighth, approves <sup>a</sup> of it in the declension; for this reason chiefly, that *Nature may be eased of her Load, and the morbidick Matter diminished*. And as he had been very

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<sup>a</sup> *De Pestilent. c. 143*



conversant in Practice, he has laid down some sound Rules whereby the Physician's Judgment may be directed: He advises this Method of carrying off the Humidity, *if the Body be weakly, bloated and full of Humours, or there be a lurking feverishness*; but chiefly if there be added *an undulating Pulse*; for in this case *the Strokes are many and vehement, and denote Diseases abounding with too much Humidity*; and among these *continual Fevers* <sup>a</sup> particularly. Do you think any one could lay down these Precepts about the manner of *Purging* in the declension of the Distemper, (namely when the Pustules are first dried) either more expressly, or with better Judgment? Neither did *Rhazes* deliver these Rules only in a dictatorial manner, that they might be practised by others, but confirm'd them by his own, and that indeed a very long Experience. For the Case of *Hebitbusseyn's* Daughter is observable; which, tho' I have touch'd upon in another place <sup>c</sup>, yet since it is apposite to our present consideration, give me leave to mention it again. "She therefore by the plentiful use of "Camels-Milk, fell into the *Small-Pox*; neither was she purged or let Blood before they "were come out on the *fourth Day*; therefore they came out so much crowded, about "the Eyes especially, that the good Women "who were present, wondred it was possible to preserve them by Medicine. The "Belly,

<sup>a</sup> Lommii Med. Observ. lib. 3;  
<sup>c</sup> Comment. 7. 88.

<sup>b</sup> De Mirabil. Curis Lib. 33

“Belly, as it is customary in this case, was  
 “always bound; however, since at the decline  
 “of the Distemper there still remain’d some-  
 “thing of an *acute Fever*, and since this judi-  
 “cious Physician saw it arise from the remains  
 “of the Humours which could not be thrown  
 “off by the Pustules, he judg’d she could be  
 “reliev’d no other ways than by *Purging* :  
 “But so weak and languid was this Patient,  
 “that she could bear no Medicine in any de-  
 “gree strong, therefore he wisely manag’d her  
 “with such moderation, that he order’d her  
 “nothing but *Ptisane* and *Aq. Fruct.* (of which  
 “the form may be seen in *Mesue*<sup>a</sup>) for fifteen  
 “Days continually, which produc’d *two* Stools  
 “every Day. At length, on the *fourtieth* Day  
 “there was a Sediment in her Urine; but  
 “neither was she perfectly recovered till the  
 “*fiftieth*.” You see what a feverishness this  
*Small-Pox* rais’d, and to what a length it run  
 out : which yet that sagacious Physician, at  
 last, removed by the help of *Purgatives*,  
 and a perseverance in that Method of Cure.

*Alfaharavius*, a follower of *Rhazes*, how-  
 ever forgetful of his Master, has advis’d the  
 same manner of Cure, and almost in the same  
 Words: He orders the Belly to be loosened  
 when the Distemper is come to a *Crisis*<sup>b</sup>, par-  
 ticularly if the Patient’s Strength continue, and  
 the Pulse be any thing strong; and he recom-  
 mends those Medicines, as more preferable to  
 the others, which excite least Heat.

Several

<sup>a</sup> *Antidot. lib. 3.*

<sup>b</sup> *Cap. 10. Partic. 13.*

Several Ages after this, there was no mention made, among the *European* Physicians, of this Method of *Purging* in the *Small-Pox*; neither is that any wonder; for *Avicenna* said nothing of it; so that we may not look for any thing among them which that *Prince* had omitted.

At length, upon the restoration of Learning, and the shaking off the *Arabian* Yoke, Mankind learnt to deliver Things, not upon the Authority of others, but to use Experience as their Guide, and to follow their own Opinion. This attempt, therefore, either of Art or Nature, is hinted at by that sagacious Physician *Fernelius*; who, tho' he has said but very little concerning the *Small-Pox*, yet tells us, that the *violence* of this Distemper may be restrain'd, if the Body being opened it should critically throw off the remains<sup>a</sup> of the contaminated Humours: He observes also, That the Fever continues till that foul Load is discharged by Stool<sup>b</sup>. *Marcellus Donatus* of Mantua, who lived much about this Time, and was the first among the Moderns who wrote an entire Treatise of the *Small-Pox*, altho' he is something cautious in this Matter, yet when the Disease is in the declension, and the Pustules dried, especially if a Fever or any other Symptom urge it, advises, in imitation of *Alsharavius*, gentle Purges<sup>c</sup>. Besides, if a Flux should supervene, upon account of any Matter

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<sup>a</sup> De Abdit. Caus. 198.

<sup>b</sup> Pathol. 43.

<sup>c</sup> De Variol. f. c. 6. p. 189.



left by Nature, which, not being discharged thro' the Skin, she endeavours to carry off by Stool, He advises the prudent Physician to second this attempt of Nature, by giving *Rhubarb*, or any other such kind of Medicine : And plainly derides those who contend that purging is never to be used in fluxes of the Belly<sup>a</sup>.

Other Physicians likewise, who flourish'd nearly at the same time with *Marcellus* in Italy, for instance, *Mercurialis*<sup>b</sup>, *Rod. a Fonseca*<sup>c</sup>, *Campolongus*<sup>d</sup>, *Diomedes Amicus*<sup>e</sup> in France, *Parey*<sup>f</sup>, and lastly, *Mercatus*<sup>g</sup> in Spain; seem to have the same sense of this Method of loosening the Belly. In whose Steps very many Physicians, both of these and other Nations, have trod<sup>h</sup>. So that *Ballon* of Paris, a Person the most conversant in Practice at the beginning of the last Age, thus concludes his Discourse concerning the *Small-Pox*, namely, "That he had learnt by long Experience, that "in popular Diseases, wherein *Exanthemata* "had appear'd, *Bleeding and Purging* often "repeated, nay, a fetid Discharge procured "either by Art or Nature, or the force of the "Distemper, had reprieved many from the "Grave." Neither must that Case be passed by which *Chicot*<sup>i</sup>, speaking of gentle Purging, relates : He there informs us, that *Simon Petre*, notwithstanding the opposition of *Alan, Mare-*  
*scot*,

<sup>a</sup> C. 30. p. 209.    <sup>b</sup> *Morb. puer.* 25.    <sup>c</sup> 252.    <sup>d</sup> De Variol.  
<sup>e</sup> C. 6.    <sup>f</sup> Lib. 19.    <sup>g</sup> 462.    <sup>h</sup> *Jul. Cesar.*  
*Claud. Empir. Rat. Genuensis Excerpt. Zacutus Lusit.* 786. *M. Sebiz.* 6. 5. *Jos. de Med. Cret. Lister* 320.    <sup>i</sup> *Epistol. de Variol.*

*scot*, and *Duret*, three of the most celebrated Physicians at that time, saved the Daughter of a *Parisian* Senator, who, at the declension of the *Small-Pox*, laboured under a most dangerous Fever, by this Method of Cure.

Thus we see this Doctrine of the usefulness of *Purging*, when the *Small-Pox* were on the decline,\* prevailed even unto this Time. These Precepts indeed, as we find them deliver'd by Authors, are entirely consonant to Reason and Experience: But such, however, as we may perhaps, with some Reason, judge too lax, and not sufficiently accommodated to the exigency of the Distemper. For, either at what time particularly, or on what Day this *Purging* ought to be instituted, has not hitherto been determined by any one. At length, *Sydenham* thought it might be preferred to any other Remedies on the *thirteenth* Day in the confluent *Small-Pox*, if Bleeding had preceeded; however, he positively forbids it before that Day. But that Advice, as I have elsewhere observed<sup>a</sup>, and as it evidently appears from these Cases which I have related, was too cold, and not nicely enough suited to the danger. Therefore if we have innovated any thing it is this, that we have judged it necessary to make use of this Remedy, for the most part, in Cases of Extremity, even before the *thirteenth* Day.

However, that we may the less wonder this Subject has been so slightly and confusedly

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<sup>a</sup> *Comment.* 91.

treated of by Authors, it is easy to observe, (which yet I find to be little understood) that they have not taken due notice even of that very Fever which constantly attends this kind of *Small-Pox*, at the time of maturation. But it is at this time of the Distemper, that far the greatest part of the Diseased are both in danger and die : So that you will find them in that very case, which requires the nicest Judgment in the Physician, and the most exact Precepts of Cure, either wholly silent, or, if you regard the hazard of Life, perfectly trifling. For what have the *Arabians* themselves, and among the rest *Rhazes*, whom we have so often mentioned ; I say, what have they done in this important conjuncture, nothing but relieve the *Eyes, Nose and Throat*, and prevent the *Pits and Scars* of the *Small-Pox*, as if they had been entirely thoughtless of the *second Fever* ? These Advices are indeed well enough adapted to the ease and comeliness of the Patients ; but little serviceable with regard to the Health.

It appears indeed something surprising, that among so many Authors, who have since succeeded, hardly any one, if you except *Augenius* and *Diomedes Amicus*, has even slightly touched upon this *Fever*, which arises upon the *Suppuration* of the *Small-Pox* : And of these, not one has fully explained, either on what Days it usually first appears, or what Course it keeps, or what Disorders it brings along with it. Even they who have publish'd entire Books upon this Subject, as *Donatus*,



*Campolungus, Antonius Portus*, have made no enquiry into this *secondary Fever*: Neither has *Sebizius* given us any light into this Affair, altho' a very prolix Writer, and one who took great pains in compiling all the Sentiments of different Authors. And indeed they are all of them so defective in the History of this Disease, that they have no where mentioned either the several *Stages* of the *Small-Pox*, or that flux of Spittle which almost constantly attends the *Confluent* sort. All which you may perceive were entirely passed over, not only by the *Foreigners*, even *Riverius* himself, but (what is wonderful) by our own Countryman *Willis*. Thus, tho' it may appear at first sight incredible, it will be very evident to the studious Reader, that the several Commentaries upon the *Small-Pox* have been entirely lame and imperfect, in these Particulars which we have mentioned, down from the Time of *Rhazes*, even to that of *Sydenham*; who has largely supplied this defect, to the great happiness both of the Patient and Physician; and has himself more clearly explain'd the different *Stages* and *Kinds* of this Distemper, than all the other Physicians of all Ages and Nations. Neither has he been, like the rest, deficient in this last act, as it were, of the *Small-Pox*; but, as he wisely ordered many things, either towards the lessening or extinguishing this *Fever*, so he *first* introduced amongst us this Method of loosening the Belly, a Method instituted by the remotest Antiquity. So that  
they

they who blame this Method of *Purging*, as a *thing new and unheard of*, must have been little conversant in the Records of Physick : However, they have my free leave to be still pleased with their own Imaginations, how childish soever ; tho' I can by no means consent, that they who have so small a share of Learning, should determine concerning the History of these Affairs.

But let us suppose this Method of *Purging*, to be *new and unheard of* : As if it were a Crime to invent a new Method of Healing, which our Forefathers did not follow ; or as if the Art of Physick was so absolutely compleat, that it could possibly receive no Amendment or Addition. Is not *Sydenham* therefore to be blamed, who publish'd many new things, and those greatly important to human Life, concerning the cure of the *Small-Pox*, which, as we have seen, was entirely rude and imperfect ? Or, Did he finish every thing so perfectly, that they who succeed him, can make no Additions to him ? We have ill deserv'd, I imagine, of those whom we have recovered, that we have tried the force of Imagination in this Matter, and experienc'd how far Physick may be carried in the most difficult Cases. It had undoubtedly been better to have gone on prudently in the beaten Path, and therefore a safe one : It would have been better, I say, being furnish'd with a physical dread, and religiously pursuing the Footsteps of our Ancestors, to have tried nothing ; and not rambling

bling from the Rules of Art, to have looked on our dying Patients, and not have deliver'd them from Death. Without doubt we have done as great an Injury as if we had killed them, in that we dar'd to save our Patients by a new Method.

But, say they, the Patients are not always recovered by this Method of *Purging*. Indeed we are not Persons of such a turn of Mind, as to hope to give Immortality to mortal Men: Neither did any Medicine ever come within our slender Knowledge, which would certainly and constantly prove effectual in every Case; especially in this Distemper of the *Small-Pox*, wherein we are very often deceiv'd, by the purulent Matter seizing upon the inner *Viscera*, and forming an *Abscess*, either about the *Pre-cordia* or in the *Lungs*. They who being endowed with an happier Invention, have found out this Antidote against Death, may, one time or other, be so kind to make it publick. Those Medicines, indeed, which seem'd to promise some mighty Matter, have hitherto eluded our Hopes; even that celebrated Powder of *Alfaharavius*, which in the *Small-Pox*, tho' nine Pustules were come out, prevented a tenth<sup>a</sup>, whatever Vertue it might have in former Times, is now entirely decay'd by Age. Neither did *Waldsmid's Spiritus Polychrestus*, meet with better luck; from which *Doleus* affirms he had seen such wonderful Effects, That he dar'd averr, no one could hereafter die,

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<sup>a</sup> Fol. 141. col. 4.



*if he would but make use of that Medicine.*  
 But as every thing grows the worse for Age, Persons seiz'd with the *Small-Pox*, die sometimes, as far as I can learn, even at this Day, in *Germany*. Tho' indeed that *Species of the Small-Pox*, which is by us called the *Confluent*, very rarely happens in that Country, as I am inform'd by Letters from the Learned *Hoffman*, Professor at *Hall*. The same Gentleman, speaking of *Purging in the Small-Pox*, says, *He never saw those Persons succeed well in their management, who are afraid of opening the Body after the Eruption is compleated: to which purpose he himself makes use of the gentler Medicines; and advises his Pupils to do the like.*

But that this whole Question about *Purging* may be better understood, give me leave to argue a little upon it: The Patient, at the going off of the *Small-Pox*, lies ill of a violent Fever; the Pustules dry up, so that nothing more can be thrown off the Blood by the Pores of the Skin, nothing can be carried back from the Skin into the Blood; other Remedies have hitherto either answered little, or, in the Judgment of all intelligent Persons, are not likely to succeed: And, unless the medical Art intervene, the Patient must undergo the greatest hazard of his Life. Will you suffer, therefore, this Man to die patiently? Or would you not rather, in so dangerous a Case, make a trial, whether any means of Safety might not possibly be found out? When

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things are reduced to these Streights, we ought not to make the least Question, whether it is better to give a doubtful Remedy, or none at all: which, tho' it be doubtful, may perhaps save Life, at least it may protract it several Days. But, what if it should not succeed? it is sufficient that any one be thought to have tried this kind of Medicine lawfully, if he should find it to have succeeded even upon one Person in a thousand.

I do not doubt but you remember a very singular Case of a Noble Youth: He labour'd under the worst kind of the *confluent Small-Pox*; the Pustules were indeed extremely thick, and filled with a thin and indigested Matter; so that, towards the end, almost his whole Body was raw, as if it had been corroded. He reached the *ninth* Day with the greatest difficulty: The Pustules in the Face dry and very black: The Hands not at all swelled: He had frequent returns of a *Delirium and Coma*, neither was his Breath sufficiently free: His Fever burnt immoderately: No relief from the Vesicatories which had been applied. You, Sir, when you perceiv'd him to be in such extreme danger, ordered *three Drachms* of *Lenitive Electuary* to be given him; which producing *two or three* Stools, tho' it did not afford much relief, averted however the present danger: For it was thought he could not possibly survive even this very Night. The next Day when Sir *Hans Sloan* and I were called in together, we  
all

all imagined his Life to be in the most imminent danger, and foresaw there could be no hopes, unless a gentle Evacuation being made, things should take a turn for the better. Therefore, four Ounces of Blood were taken away by the help of Cupping-glasses: Upon which, since the Fever was something lessen'd, the other Symptoms were also abated. In the Evening a Clyster being injected, gave him *two* Stools. On the *eleventh* his Fever was something abated; but his difficulty of Breathing still continued with a little Cough; neither was the *Delirium* wholly yet gone off: He had a greater propensity to Sleep than was requisite. Wherefore we ordered him a *Linctus* with some *Oxymell*, and this Medicine as follows.

Rx. *Decoct. Sen. Gereon.* 3 ii.

*Syr. Rosar. Solut.* 3 ss.

*Aq. Pæon. Compt.* 3 ii. M.

This gave him *two* gentle Stools. In the Morning therefore on the *twelfth* Day, every thing was remarkably changed. For, since the Fever was in a manner gone off, he was freed both from the *Delirium* and the difficulty of *Breathing*. His Urine also afforded good Signs of Concoction. His Pulse was indeed equal, but small. *Cardiacks* were prescrib'd him, in order to recruit his long decayed Strength. The next Day, since the Fever returned, a *Clyster* was injected; which yielded as much relief as could be expected, tho' it continued but a very few Hours: For the Fever return-



ing again violently, the other Symptoms also grew worse. And, on the *fifteenth* Day, since his Strength could hold out no longer, he sunk under his Distemper, to the great Grief of his Friends.

I was the willinger to be so large in this Account, that it might be perceiv'd what effect *purging* may have in Cases plainly desperate. We confess indeed, that *Purges* are not always so effectual, but that Persons labouring under the *Small-Pox* die sometimes; but any skilful and impartial Judge will perceive from this very History, that we preserv'd the Patient by these means until the *fifteenth* Day, who would undoubtedly have died either on the *ninth* or at least on the *eleventh*, if this method of *purging* had not been instituted. But tho' we were not wholly able to ward off Death, we however gain'd a truce for some Days. And I persuade myself it is the Duty of a Physician to protract the Lives of his Patients, as far as it can be effected by Art, tho' the Time be ever so short: For what Person, even of the greatest Sagacity, can in these difficult Circumstances foretel, when we have gained even this short space of time, whether Nature may not be able of its own Strength, to recover the Patient, or at least whether Physick may not be able to contribute something likewise? Indeed, many seem to have perished either thro' the Negligence or Timidity of their Physicians, who, by the assistance of Art, might have been very happily

pily extricated out of this violent danger. But as to what regards *Purging*, it, as far as I can learn from Observation; is more conveniently and successfully practised upon *Adults* than *Children* : Upon this account I believe, that since their Strength is more confirmed, a more accurate Judgment may be made of it, upon which Point the whole Affair turns.

I have been the fuller upon this Head, that it may appear the Physician is not always to blame, if at any time the Event should not succeed to his Wish ; and that he may have given Physick with good Judgment and Art, tho' it did not avail any thing to the Recovery of the Patient. As in a *Sphacelus*, a Surgeon may judiciously cut off a mortified Limb, tho' he who suffer'd the Amputation should die in a short time after ; inasmuch as that was the only Remedy remaining which could possibly save Life. Thus in *Apoplexies*, Bleeding sometimes avails little ; nay, oftentimes, when the Evil is incurable, as Practitioners experience, it hastens on Death something faster : Yet who is there so ignorant in Physick, as not to advise Bleeding in this Case ? For unless he can relieve this way, there is no other Means left of obtaining a Recovery. How much sooner then should any one fly to *Purges* in this extreme danger in the *Small-Pox*, when perhaps he may have some small hopes of preserving Life, or at least be confident of prolonging it.

For to say something of that danger, which some dread, as being the certain consequence of

of this Method of Cure, they seem to me not to understand, either what that Distemper can bear, or in what manner this Medicine ought to be applied. But do they know any one to have been killed, or carried off by *Purging*? Perhaps they may: For my part I do not: Nay, not one whom it did not recover, unless in a Case which, in the Judgment of every one, was plainly desperate. Farther, I can affirm, which may perhaps seem strange, that not one of those who could not be saved by this kind of Remedy, ever died of a *Looseness*; and that no one ever sunk under the Operation of the *Purge*: But that those very Persons, who, tho' *Catharticks* were given them, however died, almost always found some Relief from them for a time. And this indeed is agreeable to Reason; for Nature at this time labours under the too great weight of the Distemper, and has no occasion for an additional load from the Intestines: By what Medicine then can she be more expeditiously relieved, than that whereby this load of *Fæces* is discharged? But neither yet, because a spontaneous flux of the Belly has proved destructive (which does not, however, very often happen) is the opening of the Body to be scrupled at this time of the Distemper; for whatever agreement there may seem to be betwixt them, they differ very widely: for one of these Cases shews plainly that the Strength is dissolved; in the other Case what hinders, if the other Indications agree, our trying those  
Purges



Purges which are suited to the Strength. Upon this account likewise is there the less danger from this Evacuation, in that we can moderate it at our pleasure; either by giving the most gentle Remedies, or in a moderate quantity, or at the longer Intervals. Besides, at this time of the *Small-Pox* the Belly, having been so long shut up and immoderately charg'd with *Fæces*, is not so readily loosened, as to occasion any fear of too great a Flux. Therefore it is in our own Power, either to hold in or let go the Reins; we may try this Experiment of *Purging* without any danger, in the most gentle manner; we may, if it avails any thing, repeat it at times, so that we may proceed gradually, as far as we desire. Wherefore, since this kind of Remedy is not only free from Hurt, but greatly advantageous to the Patient, I admire at the dulness of some Men, who being prejudiced, are entirely averse to it; or at least they administer it so timorously and coolly, that they are not willing to try it till the Health is even irrecoverable. As if it were better to wait for the danger, than prevent it: As if he would not more easily surmount the danger of this Distemper, who is thus reliev'd on the *ninth* or *tenth* Day, than by deferring this Medicine till the *thirteenth* or *fifteenth*, when the Distemper is become already inveterate.

But we may easily observe from whence all this Error took its rise; they are afraid, forsooth, lest upon *purging* the *Small-Pox* should strike

strike in, lest the Humours (as they say) should run back to the Center; and lastly, lest the swelling of the Hands (which yet happens quite otherways) should subside. But they may remember that *Sydenham*<sup>a</sup>, among other things, has wisely remark'd, "That this putrid Fever, for Instance, which attacks Persons labouring under the *confluent Small-Pox* on the *eleventh* Day, is entirely different from the *Small-Pox* itself; and that it is no otherways occasion'd than by the putrid Particles being absorbed again into the Blood, from the Pustules which are now come to maturation, and thereby raising this Heat: For neither in this stage of the Distemper can the Pustules, which are now hard and incrusted, be either carried inwards, or recoil within the Skin, or lose the least Particle of their bulk." Therefore that judicious Practitioner thinks no Medicine can be found out for this Fever, but what is derived from *Bleeding and loosening the Belly*. Neither indeed is the nature of the *Small-Pox* at this time, the same as that of a Tumour just tending to Suppuration; in which case a purge too hastily given prevents the Tumour from ripening: The Matter however being at length carried off, as well as may be, by the Tumour, if any reliques of it should taint the Blood, they are, in the Judgment of all Physicians, to be carried off chiefly by *Purging*. And this is sometimes advised to be done in *Ulcers*,  
by

<sup>a</sup> *Sched. Monit.* 84, &c.

by *Hippocrates*<sup>a</sup>. I observe therefore, *Dio-  
medes Amicus*, who was the first, as far as I  
can find, amongst a very few, that fully ex-  
plain'd this *Fever* which succeeds the matu-  
ration of the *Small-Pox*, and remark'd<sup>b</sup>, that  
it is little different from the *Ephemera* which  
is occasion'd by *Apostemations*, inclin'd to this  
Opinion : " For in the declension of the Di-  
" stemper, when it is known from the con-  
" tinuance of the Fever, and other Symptoms,  
" that there are any remains of the Humours  
" in the Body, he advises an Evacuation to be  
" made by very gentle *Purges* : Which Eva-  
" cuation is the same in his Judgment (*not*  
" *right perhaps*) which both *Rhazes* and *Se-  
" rapion* advise to be made in the like Case,  
" after the *seventh Day* <sup>c</sup>." *Josephus de Me-  
dicis Cretensis*, who lived something later than  
him, and was conversant in Practice *fourty*  
Years, after he had lost his Sons by an imma-  
ture Death, affirms, that we ought never to  
trust to the remission of the Fever when the  
*Small-Pox* are going off ; " but thinks the  
" Physician ought strenuously to endeavour,  
" that the putrid and cacochymious remains be  
" wholly discharged the Body by various  
" ways, especially *Bleeding* and *gentle Purg-  
" ing*.

The *Fever* which constantly attends the *Small-  
Pox* that are crowded, creates great Disorders;  
wherefore some Persons have taken very great  
pains

<sup>a</sup> *De Ulcerib.* 4.

<sup>b</sup> *Traſſat. de Variol.* c. 6.

<sup>c</sup> *Traſſat. de Variol.* c. 10.



pains that it should not *repullulate* : And have thought they could <sup>a</sup> *prevent* it, by giving the *Peruvian Bark* a little before the coming on of the Distemper. Celestial Remedy indeed! which if it could certainly *prevent* this *Fever* and the *pitting* <sup>b</sup> of the Pocks, by imparting at the same time two of the greatest Benefits to Mankind, might be able both to preserve Health as well as Beauty. But whether it has been the Lot of the Distemper or the Remedy to be changed, this faculty of the Bark has been long since vanished : So that we ought rather now to listen to those, who being happier in their Undertakings, are able *by artfully drawing out the very Seeds of the Small-Pox*, to prevent their eruption entirely, or if they should come out, to make them close themselves again. We expect therefore, with some reason, from those Persons who possess this Art, that this Distemper of the *Small-Pox* will quickly be destroyed.

But as to what regards the Cure, this Method of *purging* in putrid Fevers, and others also which are difficultly solved, has been handed down to us from the remotest Antiquity. I have said in another place <sup>c</sup>, that *Hippocrates* attempted it *sometimes* in acute Fevers; but if I had said *very often*, I believe I had not been mistaken. For that great Master in the Art of Healing, however he may have published some common Notions, which seem less favourable to this Opinion, yet when he

<sup>a</sup> *Morton* 199, 200.

<sup>b</sup> *Ibid.* 323.

<sup>c</sup> *Comment.* in *Hipp.*

he argues more distinctly upon this Matter, advises this kind of Medicine particularly to be applied to many *Fevers* of different kinds<sup>a</sup>. Thus in a *strong Fever*<sup>b</sup>, when the whole Body was seized with a Pain; in *Lipyrria*<sup>c</sup>; in a violent *Vomiting*<sup>d</sup>; and in that *Pleurisy*<sup>e</sup> which is called the *lower* one, as being situated below the Diaphragm, he commends *purging* Medicines. In like manner in a *Cholera*<sup>f</sup>, in Diseases of the *Spleen*<sup>g</sup>, and *Liver*<sup>h</sup>, in almost all *Inflammations* of the *Uterus*<sup>i</sup>; and sometimes also those of the *Lungs*<sup>k</sup>, or in Wounds of the *Head* followed by a *Fever* and *Erisypelas*<sup>l</sup>, or when the febrile Humour has fell upon the *Fauces*<sup>m</sup>, he uses the very same Medicine in a liberal manner. And He indeed pursues this Method of Cure so as to advise it more particularly when the Fever arises from a redundancy of the *Bile*<sup>n</sup>, which sometimes happens. Finally, He lays it down as a perpetual Rule for purging in *acute Fevers*, when the *Urine* comes to be thick<sup>o</sup>: And indeed this, as it is a very good Sign in the *Small-Pox*, so it intimates also, that *purging* may be conveniently instituted at this time of the Distemper. Neither was that which *Hippocrates* gave, always of the mildest kind; inasmuch as he sometimes pre-

<sup>a</sup> Aphor. 4. 10.<sup>b</sup> De affect. 13.<sup>c</sup> De Veratri usu.<sup>d</sup> Ibid.<sup>e</sup> Ibid. & 2 Vi&. acut. 11. 12, 13. & 4. 96.<sup>f</sup> 4 Vi&. acut. 105, 106.<sup>g</sup> Intern. affect. 38. & seq.<sup>h</sup> Ibid. 33. & suq.<sup>i</sup> De Morb. lib. 3.<sup>k</sup> Ibid. lib. 2.<sup>l</sup> De Vulner. cap. 27.<sup>m</sup> Vi&. acut. 4. 37, 38.<sup>n</sup> De affect. 13. de intern. affect. 38. & seq. de locis in *Hominine* 38, 39. De Morb. 2. 35, 36.*Vi&. acut. 4. 43.*

prescribed the most powerful Remedies ; as for instance, in *pleuritick Cases*, *Helleborus* and *Peplium* <sup>a</sup>. So that whoever can but dexterously turn over the Index to *Hippocrates's* Works, will easily find out the Opinion of that great Man concerning the whole Doctrine of *Purging*. Neither will it make any thing against us, if in a Treatise (which is reckon'd very spurious in the Opinion of all intelligent Persons) he should seem to have forbid our use of *purging* Medicines, unless the *Fever* be already *remitted*, and on the *fourteenth Day* <sup>b</sup>. For if one should read but a few Sentences farther, one might with a small share of Judgment, find out what was the Opinion of that Author, when there was any danger at hand. For he subjoins <sup>c</sup>, *But if he survive this Day, and the Fever abate with the purging, the Patient will recover.* By which words (says <sup>d</sup> *Antonius Ponce de Sancta-Cruz*, no mean Writer) he clearly insinuates two things, both that *purging* may be done, and that it may prove advantageous : Which place seems to me to be a remarkable proof that *Hippocrates*, in urgent Cases, gave *purging* Medicines. For, first, he treats of *acute Fevers*. Secondly, After he was afraid of, or abstained from *purging*, he says thirdly, if the Patient survive on the day of *purging* : intimating, that the Patient being in very great danger had taken a *purge*, and found himself benefited by it. Therefore it

<sup>a</sup> *Vid. acut. 2. II.*

<sup>b</sup> *ὅτε φασμάων, 4.*

<sup>c</sup> *Ibid. 5.*

<sup>d</sup> *Imped. magn. Auxili. lib, 3. c. 12.*



is unjust not to try that Remedy, which, in the like danger, is the only one remaining.

But this Doctrine of *Hippocrates*, as it was very well understood, so is it every where sharply vindicated by *Galen*; affirming, that the putrid Matter, when it is fixed in the Body, can be carried off by *purg*ing only <sup>a</sup>. And they who have taken much pains in explaining the Writings of the Ancients <sup>b</sup>, have treated very largely of this Method of curing *Fevers*: So that there has been no one, for a long while, who, when any putrid Humours have given rise to a Fever, does not think they ought to be discharged by *purg*ing, which, to use *Fernelius's* Phrase, solely draws off the *Cacochymy* <sup>c</sup>. “ Thus (as the same Author, speaking also of *Fevers*, observes) it has “ been often remarked in Practice, that by “ the purging off the cruder Humours, whether it happened either spontaneously, or by “ Art, the Concoction is hastened, and that “ afterwards the Urine becomes purer, and “ lets fall a Sediment; and the Disease, which “ was before both doubtful and dangerous, is “ rendered both safe and salutary.” Neither are they afraid, that by this method of *purg*ing, they should either encrease the quantity of *Bile*, or raise too great an heat in the Blood; since those things which they advised in these putrid *Fevers*, were both mild and moderate.

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Which

<sup>a</sup> *Method. Composit. passim.*

<sup>b</sup> *Prosper. Martian. in Vist.*

*acut. 386. Valesii Method. Med. lib. 2. Lomnius de Febris Herc.*

*cul. Saxon. 654, &c.*

<sup>c</sup> *Method. Med. 83.*

Which we have also advised to be observed in that Method of curing the *Small-Pox* which we follow. So *Sydenham*, imitating these Persons, insists only upon Evacuants, not only in a *spurious* <sup>a</sup> *Peripneumony*, but in that also which he calls an *Hyemal* <sup>b</sup> *Fever*, arising from putrescent Juices : And remarks, that *after once Bleeding and thrice Purging it generally went off*. Besides, in that very *pestilential* <sup>c</sup> *Fever*, which raged violently the Year following the Plague, he ventured to give a purge in *twenty four Hours* after having given a violent Sudorifick : Which Method of Cure he glories to have succeeded so happily, *that he did not lose one person who laboured under this Distemper*.

And certainly there are Fevers, whether you will call them malignant ones, or by any other Name, when they have continued for any long time, and there has been no perfect *Crisis*, which hardly admit of any other Cure than what is carried on by gentle *Catharticks*. This indeed is prov'd by daily Experience; and we have very lately found it true in *three* Patients, whose Cases were very remarkable. All these were seized with a Fever very much the same; which, tho' it continued without Intermission, never arrived to any remarkable degree of Heat; sometimes it seemed to remit. All of them were much affected in their Heads for many Days : So that the first lay continually

<sup>a</sup> *Constit. Ann. 1674, 1675.*

<sup>c</sup> *Annis 1665, 1666.*

<sup>b</sup> *Postscript. ad Edit. 1685.*

nually after the manner of one in a Delirium, or an Ideot; the second laboured not only under a lethargick Drowziness, but, what is very rare, under an *Hiccough* for *eleven* Days continually; and the third, having both lost his Speech, and being by Intervals convuls'd was an horrid Spectacle: The Fever in each of them was protracted beyond the *twentieth* Day; it continued upon them all in so constant a tenour, that Medicines availed nothing at all, they seemed equally suspended between Life and Death for near *eight* Days continually: However, they were all so far relieved by *Purging*, repeated at due Intervals, and with proper Caution, that by this Method of Cure they were at last effectually recovered.

Why then cannot the same Medicine take place in the *Small-Pox*, when, they being already suppurated, the putrid Matter which is thrown back upon the Blood has excited a feverish Heat. Which we often find can by no means be appeased, unless it is some way or other disengaged again from the Blood. That this may commodiously be done, is the Part of a skilful Practitioner; for, as the Occasion is very pressing, so in this Case there is required both a sound Judgment, and also some Experience. For many things render that difficult to an Ignorant Person, which a Practitioner is extremely expert in. But he who is endued with this happy Sagacity, will easily discern what Cautions he ought to follow, and what Seasons he ought to chuse, in order to



adapt these Precepts concerning the Cure of the *Small-Pox* to the present Distemper : Which yet he will so prudently manage, as very often, (when Nature is strong enough of itself to throw off the Fever; and sometimes also, tho' the Fever is carried off, it should not be able to effect any thing) to judge, that if he ought not to abstain from purging Medicines, at least he ought to apply them very sparingly.

What we have said concerning this Method of curing the *Small-Pox*, is levelled solely against that danger which attends the *second Fever* : We are not talking of that kind of the Disease in which the Fever continues extremely moderate, and goes off in a manner of its own accord : Inasmuch as it is unnecessary to make use of this Remedy, unless in violent Disorders, and in desperate Cases ; as it is unseasonable, so is it also unsuccessful.

But why do I argue and dispute any longer with those Opiniators, who have never once tried this method of Cure ; neither, if they are willing to try it, will they be ever able to understand it ? Why do I oppose them with Reason in a Matter so exceedingly evident ? To Experience I appeal ; let that be the Arbiters and Umpire in this Controversy.

Let those Persons who are conversant in Physick, practice, with me, what I have writ for the sake of Physicians, and not Nurses, if they should approve of it ; if not, they have my free leave to reject it : For I have neither Leisure nor good Will to waste my Time  
in

in disputing with captious Men. I am determined to spend the remainder of my Days, not in examining frivolous Cavils, but only in preserving the Lives of Mankind, as much as possibly I can. However, I would advise those Persons who inveigh against us, either ignorantly or maliciously, that they would diligently consider the Words of the celebrated *Valesius*<sup>a</sup>, who treats also of *purging in Fevers*.

“ In this Case particularly we must be determined by Experiments; these Men will produce their own, and will swear undoubtedly, that they were greatly successful. On the other hand, those Men will deny that they ever saw any but what were extremely unfortunate; these therefore are oblig’d to confess, that they have either injured abundance in the trial, or that they seldom or never tried it, but abstained from it out of an avowed Prejudice. Upon both accounts, their Authority is not to be regarded: Besides that, the Testimonies of the *affirmative* side are really of more weight than those of the *negative*.

I must confess, the constant Cant of those trifling and (as they imagine themselves) *philosophising* Fellows, has oftentimes raised my Indignation, and oftentimes also my Laughter, when they tell us we must always attend *Nature*, and proceed in that Path which *Nature’s* self points out to us: As if no body knew this

R 3

but

<sup>a</sup> *Method. Medend.* 4. 2.

but Persons entirely unskill'd in all the Arts and Sciences: As if they were less capable of this who are assisted by the Writings of the Ancients, and have made some progress in Learning. What else have those ingenious and learned Men done, those great Restorers of Physick among the *Greeks* and *Arabians*, what End did they propose to themselves in their Studies, than to understand only how to follow *Nature*; to follow her, however, in such a manner, as that they might guide and direct her by Art, whenever there was occasion? Can we receive therefore no advantage from their Lucubrations? Can we find no assistance in our Endeavours towards relieving the Afflicted, from their Experience, Histories, and Institutions? Because, forsooth, it is the part of an honest Physician to observe only what is indicated by *Nature*. In truth, those very Persons who entertain these Sentiments, trusting too much to their own natural Sagacity, will not easily understand what is meant by the word *Nature*; neither will they understand what she Indicates, nor what help she stands in need of; or, lastly, by what means she may be assisted.

Despising therefore these empty Philosophers do, you, Learned Sir, still persist in that Path which you have long pursued with so much Reputation: Neither will you be ashamed, how great soever your Genius may be, to seek any assistances of Learning whatever,



Go on to revolve that great stock of Books you are furnished with, and to extract, as you do, many things from thence, into your daily Practice.

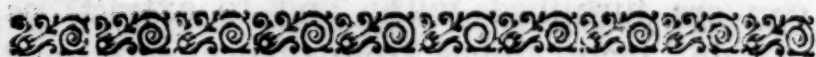
Go on to profit by the Labours of others, relying upon your own sound and exquisite Judgment, no less than from your own Experience: And if by accident any thing should occur in these Papers, which you might be willing to have made your own (tho' few things will occur which have not been long so already) you will not despise it, tho' published by any Author whatever.

*London, Sept. 20. 1729.*

While I was writing these things I receiv'd some Letters from Physicians remarkable for their Learning and Humanity; which, because they accurately and elegantly explain this whole Affair about *Purging*, I promise myself will not be disagreeable to you.

R 4

*Learned*



*Learned Sir,*

**I**F I am not mistaken, I promised you the relation of one, and that a very remarkable Case; I now, at last, perform my Promise, and am willing to believe, that by adding one or two more Cases, I shall easily obtain your Excuse for my delay, which, if I had not been hindred by my own bad Health, I should not have made.

*Case I.*

**A** Lovely Youth continued safe for several Months, tho' the *Small-Pox*, and that a very ill sort, was rife at *Oxford*. At length, some sudden Affairs required him to take a long Journey; I foretold, that by changing of the Air, and by riding on Horseback, he would be seized with the *Small-Pox*, and therefore advised him, upon the coming on of the first Symptoms, to be blooded and take a Vomit. And thus Matters came to pass: Being seized with the *coufluent Small-Pox*, and attended only by an Apothecary, he took hardly any Physick till the *ninth* Day. But there being some appearance of danger I was sent for: In the mean time, however, my Friend Dr. *Burton* being called in, since he was then accidentally in these Parts, he visited the Patient,

Patient, and ordered him some *Cardiacks* and a *Paregorick Draught*, and applied a *Blister* to his Neck. On *Sunday* Morning, being the *tenth* Day from the Eruption, I came: His whole Face was nothing but one continued Crust, resembling a kind of Parchment, or rather a white Wall: His Body was universally covered over with confluent Pustules, that nothing but Pustules could be discerned. His Strength however still continued firm: His Urine copious, and a laudable Spitting. On the same Day Dr. *Burton* returned to *Oxford*, giving me no good hopes of the Patient. In the Evening his Fever began to rage violently, attended with the greatest Inquietude. I then set aside all *Cardiack* Medicines, and only gave him a gentle *Paregorick*. In the Morning he seemed something refreshed with his Sleep; the Symptoms were much the same as before, only I observed the Urine, which both then and always he discharged in large quantities, to be limpid and pale, without any Colour. With good reason, suspecting that a Phrenzy would follow, I applied Blisters to both Arms; nevertheless, within two Hours, he was seized with a most violent Delirium and Phrenzy, so that he could be hardly held in his Bed. I prescribed a *Narcotick Draught* to be repeated within six Hours. In the Evening, by persisting in the same Method, and exhibiting at due Intervals temperate *Cardiacks*, I found every thing changed for the better. And thus things proceeded happily till the  
thir-



*thirteenth* Day. The Spitting, with the help of a *Gargle*, flowed well: There was likewise a discharge of Urine, tho' still pale. The Pustules, however, over the whole Body, Hands and Feet, which I then expected to swell and be filled with Pus, being now entirely flaccid and empty, fell in. In the Morning his *Belly loosening* spontaneously he had *ten Stools*; in which, as well as in his Spittle, there was some appearance of Blood. His Urine came away insensibly: He was seized with frequent Spasms, Drowziness, Coma and Delirium. His Pulse so very small that I could hardly perceive it. In one word, He was so far gone, that there was hardly any appearance of Life in him.

In the mean time he had a violent Looseness, so that giving him a Scruple of torrified *Rhubarb* in a Draught of *Decoct. album*, it instantly passed thro' both Stomach and Intestines without any alteration. In this imminent danger I gave him a *Styptick Bolus*, with such Success that it stopt his Flux. I applied *Blisters* to his Legs, and gave him a *Narcotick and Alexipharmick* Draught, in order to refresh, in some measure, decay'd Nature.

All things succeeded better than I expected; the Blisters answered very well, as they had done before. He had some Sleep, and that tolerably easy; and his Strength seemed to be something recruited. But on the *fourteenth* Day the *Diarrhæa* returned in the Morning; and I order'd him the following Draught:

. *Tinct.*

Rx. *Tinct. Sacra* 3ii.  
*Syr. Rhubarb* 3i. M.

Thus Nature and the Medicine together gave him *fifteen Stools* within twelve Hours : In the mean time *Cardiacks* were not neglected. Even you, Sir, might perhaps have been a little surpris'd, had you seen this happy and sudden change of all the Symptoms.

On the *fifteenth Day*, the Pustules on the Hands and Feet were again swelled : And on the *sixteenth* the Urine separated and was of a laudable Colour. In the Evening, however, his Looseness returned again of itself ; but upon taking of *Opium* the Patient had a respite for some Hours.

On the *seventeenth* in the Morning it return'd again. But since I found his Strength to be good and firm, I immediately ordered him a *Cathartick* made of *Decoct. Senna Gereon.* and *Syr. de Spina Cerv.*

At length, on the *eighteenth*, he rose out of Bed, being now freed from danger, (his Eyes being then first opened for *thirteen Days*) and using proper Methods, he was perfectly recovered. This, however, I believe, seldom happens, that within *five Days*, (to wit, from *Wednesday to Sunday Night*) any one should have near a *hundred Stools*.

Case

## Case II.

A Woman was seized with the *confluent Small-Pox*, numberless Pustules appear'd on the Skin, which yet were by no means swelled as they ought to have been. Temperate *Cardiacks* and *Anodines* being taken to no purpose for several Days; on the *fifth* a *Blister* was applied to the Neck, which succeeded happily, and the Pustules proceeded in a regular manner. But on the *sixth*, in the Evening, every thing took a turn for the worse, the Pustules sunk in; which was attended first with a frequent inclination to make Water; then succeeded an involuntary Emission, and afterwards a total suppression of it for thirty Hours. She had a *Dilirium*, *Drowsiness*, and small *Pulse*, and almost every other Evil.

On the *seventh*, in the Morning, two *Blisters* were applied to the Arms, and a temperate *Cardiack* was likewise exhibited. The Plasters had no effect. In the Evening I ordered two more to be applied to the Legs, and *Cataplasms* to the Feet. A *Clyster* was also injected without any Success.

On the *eighth*, in the Morning, finding nothing succeed, and perceiving hardly any Pulse at all, and every Body about her despairing of her Recovery, I order'd her the following *Cathartick*;

Rx. *Decoct. Sen. Gereon* ʒ iii.  
*Syr. de Spina Cervina* ʒ i,

*Tart.*



Tart. Vitriolat. ʒi.

Aq. Mirabilis ʒvi. M.

This not working I order'd another *Clyster* to be given her : Then indeed was the Matter accomplish'd ; for within six or eight Hours she had *six or seven* very large *Stools*. And, what is surprising, in the Evening the *Blisters* were all risen very well. By the help of a *Gargle* we provok'd a laudable Spitting. But, on the *eleventh* Day, observing the *Pustules* not to swell at all, and that the Patient was still burthen'd with her Distemper, I ordered another *Cathartick* with very great Success. Neither did the Disease, after this, threaten any Ill, which does not usually happen, and which ought to be expected, when the *Small-Pox* are so crowded and run together.

## Case III.

I Have now in hand the Cure of a young Woman, whose Case is something parallel, except that the *Blisters* by no means perform'd their part. She was attended with a difficulty of Breathing, wherefore I order'd a Vein to be opened. And from the *ninth* to the *fourteenth* I daily prescrib'd either a *Clyster* or a *Purge*.

On the *ninth* Day she had *thirteen* *Stools*. She likewise often took an *oily Mixture* with *Oxymel scillit.* which carried on the Spitting very well. It is now the *eighteenth* Day, and I judge her to be entirely void of any danger from the *Small-Pox*.

Case

## Case IV.

A Girl, tolerably robust, labour'd under a violent Pain of the Head and Back, with a Nausea and tension of the Stomach, about the time when she expected the *Menses*. But these not coming down, the Apothecary gave her *Steel* and other things of the like kind for three Days : But the Girl complaining more and more I was called, and easily perceiving the *Small-Pox* just beginning to appear, I ordered a Vein to be open'd immediately. On the *fourth* Day she was seiz'd with a large flux of the *Menses and Belly*, which continued for about *three* Days, but moderately : The good Women and even the Apothecary himself were very much terrified, and very earnest in stopping, as soon as possible, this *Diarrhæa*, as they called it. But I being of a different Opinion, advised the contrary : Nor do I at all doubt, but that the Recovery of the Girl depended entirely upon that *Flux* : By this means Nature threw off that *Steel* which had been so unseasonably given. Besides, I do not think the Looseness could have been stopt, without suppressing the *Menses* at the same time. I will not enter here into an Argument, but so it was, that by giving only temperate *Juleps* and Liquors for those Days, the Girl recovered.

Thus, Sir, I send you these naked Cases ; if there be any thing in them worthy of notice

tice you will readily discern it. I am surprised, however, that so rational a Practice of *Purging* should meet with so many Adversaries. Certainly they either not read at all, or else they do not understand. The generality of those whom I have yet heard object to this Method, take for granted, that *Purging* is asserted to be always necessary in the *second* Fever, in every kind of the *Small-Pox*.

I wish, indeed, there was any certain Method of Practice in the *Small-Pox*, which would as easily cure them as the *Bark* does an *Intermittent Fever* : But all that is asserted of this Method is this, that *in some certain Cases and Circumstances, all our Hope is placed in Catharticks*. I will not here, Sir, interrupt you with my Reasonings ; however, I believe, if we considered the Matter well, it might all be reduced to this general *Theorem*, which might easily be demonstrated, *viz. That in all kinds of Diseases, wheresoever and whensoever there is either any Constipation or Plethora, or any appearance of it, there Purging well ordered and duly performed, is always not only safe, but necessary*. In a *Plethora* (I mean a Plenitude of any kind whatever) Bleeding is likewise, for the most part, necessary. In *Inflammatory Fevers*, indeed, and some *putrid* ones, a *Plethora* is easily discerned by the Symptoms. But in the *confluent Small-Pox* it often deceives the Physician. For while the *Small-Pox* do their part, if the Pustules are duly swelled, if there is a copious flux of Spittle



Spittle and Urine, they imagine every thing proceeds well, and indeed not without Reason : Nevertheless, nothing is more common than for such a Patient to be carried off, as it were, by a sudden Death, a Day or two after the *Crisis*. In *Cases* thus full and loaded, tho' the *Secretions* may proceed well, *Purging* is entirely necessary, and that not too late. The mere quantity of the Disease makes a *Plethora*, and an *Evacuation* is requisite to relieve Nature. This kind of *Plethora* is frequently attended with a difficulty of Breathing, Phrenzy, Deliria, great Inquietude and want of Sleep; and often a slow Pulse upon account of the *Plethora*. By *Constipation* I mean, that state of the *Animal Œconomy*, when all the *Secretions*, or at least some, are either not at all, or not rightly performed. This too often happens from a too great and constant use of the *hotter Alexiphar-micks*, which, if they do not produce their proper effect within a due time, are not only given to no purpose, but always with some certain danger, and that not only in the *Small-Pox*, but in *putrid Fevers*, those particularly which are *Mali Moris*. But sometimes also a *Constipation* happens from the mere weakness of Nature, from a soft and relaxed Tone of the Fibres; and also *mala Stamina*. In these *Cases*, however, *Purging* may avail.

## Case V.

A Youth of this tender Constitution was very lately seized with the *Small-Pox*, of the *confluent* kind. His Pulse was small, and his Strength but little. I order'd *Gascoign's Powder* ʒi. to be given every eight Hours: After two Doses he bled sixteen Ounces at the Nose (tho' a Vein had been before opened) and it was at last stopt with some difficulty. His slender Vessels could not bear such temperate *Cardiacks*; yet without *Cardiacks* he languished. His Urine and Spitting always flowed plentifully. On the *ninth* Day he was seized with a *Delirium*, *Drowsiness*, and the Pustules were totally depressed. *Vesicatories* were applied to the Neck and Arms, which drew forth a very large quantity of Humours; however, the Patient did not at all feel them. On the *tenth* Day *Vesicatories* were applied also to the Legs, which likewise succeeded well. However, all these things did not remove the Distemper: He, in a manner, dragged on Life. On the *twelfth* Day I gave him a gentle *Purge*; which was again repeated on the *fourteenth*. And thus the Patient grew well again. So that this tender Youth, who could scarce bear any kind of Remedies, except *Anodines*, was recovered by the help of *Catharticks*.

Besides, a *Constipation* happens not only in the *Crisis* or *second Fever*, but sometimes also

in the beginning: The Pustules at that time not proceeding rightly, and the other Remedies not answering, by giving a gentle and proper *Purge*, I have often removed all the ill Symptoms which threaten so many dangers in the *Crisis*. This Practice I long since learnt from my *Father*, who often followed it with good Success; as myself and many others can witness. And indeed the *Small-Pox* generally proves very mild, if either an *Emetick* of *Ipecacuana*, as is usual, or Nature itself has produced a *few Stools* at the beginning. And how capable *Catharticks* are of throwing out the Pustules, namely, by detarging the cuticular Passages, and setting Nature at liberty, take this short Example.

In the Month of *May* I was taken ill of a *Fever* (the History of which I shall not relate), after some time the Fever seemed to be solved. However, the Physicians began to suspect there would be an eruption of some Pustules (commonly called a *Rash*.) I was therefore confined to my Bed and Sudorificks; *Vesicatories* were also applied. And after six Days, my Urine, Tongue and Pulse indicating the Fever to be solved; and there being yet no eruption of the Pustules the Physicians order'd me to arise; and the next Day, I being very Costive, a *Clyster* was injected. Within a Day or two they gave me a *Purge*, and in the Evening a *Pægorick* Draught. Having entred my Bed I felt myself immediately to be burnt and vellicated, as if with *Blisters*. I fell  
into



into a profuse Sweat, which lasted three of four Hours. After that I slept. In the Morning I found myself as crowded with Pustules, as if I had been seized with the *Small-Pox*, which Eruption continued violent for two *Months*.

In a word ; Nature is always simple in her ways, and the Physician has nothing to do, but follow her. And it is no wonder if those Persons, however Learned, who are too much pleased with Hypotheses, fall into Errors. It is however very true, that many ingenious Men, not duly attending to Nature's Direction, attempt to cure the Symptoms instead of the Diseases themselves, and therefore make more Distempers than Nature has done.

And this Error seems chiefly to arise from that confused heap of *Diagnosticks* which are generally to be met with in most Physical Writers. I wish that You, or any other Gentleman well versed in the *Mechanicks and Mathematicks*, had either Leisure or Inclination seriously to consider the *Characteristick Notes* and *Analogy* of Distempers. And I am persuaded, that the kinds of Diseases and their *specifick* Differences in many Cases might be determined. I laboured a long time myself at this Work, which is so much wanted, and at length brought it to a Conclusion. But reading it over several times, and finding it not answer my Wishes, I therefore, according to its deserts, dedicated it to the Flames. Of which Action, I must confess, I now repent,

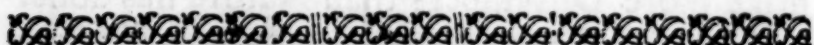
for tho' I was myself unequal to the Task, I might perhaps have given the Hint to some abler Hand to have finished such a Work.

Farewel, Learned Sir, indulge my Loquacity to You, who are so great a Master in our Profession, and forgive my too hasty Writing. Long, Sir, may you share such an extensive Reputation, as to enjoy the Love and Admiration of all Learned and Good Men, the Hatred of all the Bad, and the Envy of the Ignorant.

I am, &c.

All Souls College, Oxon.  
Sept. 10. 1719.

Sedgwick Harrison.



S I R,

Since You had some Discourse with me in the Country, about the usefulness of Evacuations, and particularly *Purging* in the *second Fever* of the *confluent Small-Pox*, and were desirous of knowing my Opinion in that Matter, I now send you some Observations, the truth of which you need not in the least doubt.

Case I. A. D. 1703. Nov. 17.

I Was sent for to a Youth about seventeen Years old, he laboured under a severer kind of the *confluent Small-Pox*, than I had ever  
seen

seen in my Life before. As far as I can recollect, I first visited him on the *twelfth* Day, at which time the *secondary Fever* raged vehemently : He had had no Stool from the first attack of the Distemper ; He had lost all his Senses, tho' he was free from a Delirium ; however he lay Stupid and Comatous. *Vesicatories* were applied in the mean time : I considered with my self that he could not possibly escape Death, if so great a Load of Excrements should remain within him, as he must necessarily have contracted all this length of Time : I therefore ordered him a gentle *Purge* of *Lenitive Electuary* dissolved in a little Simple Water. This Medicine had a wonderful Effect, for giving him *three* Stools it brought away such a Load of fetid Matter as astonished all the By-standers. The Fever abated ; his Senses returned ; and growing well gradually, without the help any other Medicine, he was perfectly recovered.

*Case II. A. D. 1717. May 11.*

I Visited a Man three and thirty Years old, on the *tenth* Day of the Distemper ; after the old Women had plentifully supplied him with Sack and Saffron, towards raising the Pustules, as they say. The *Small-Pox* were of the *confluent* kind, and that no common one. His Fever and Phrenzy run so high, that three or four Men could hardly hold him down in his Bed. I therefore took away a large quantity



tity of Blood, whereby the Fever was not much lessened, for two or three Days, altho' there seemed to be, if not an Intermission, at least some Remission. I had not before this time had the good Fortune to read your excellent Writings upon this Subject, wherefore I was in doubt, whether I should follow your Method or not. I therefore prescribed the *Bark* for two or three Days. But since the Patient found little Relief from this Medicine, and it being the *fourteenth* Day, he was now in great danger of his Life, I applied some Blisters; and having first prepared his Body by a *Clyster*, and given him an *Anodine* after that was come away, I, for the first time after reading your Book, advised *Purging*. By this means he was restored to his Health, who had been adjudged to Death by every Body present.

*Case III. A. D. 1717, July 3.*

**A**N Infant three Years old was committed to my Care: Which, tho' a *Diarrhæa* had accompany'd the *Small-Pox*, was violently afflicted with the *second Fever*, about the *tenth* or *eleventh* Day. I *purged* him every other Day for *four times*, before the Fever could be removed, which being then done, the Infant in a short time grew well.

*Case*

## Case IV. A. D. 1717. July 11.

I Attended a Youth about sixteen Years old from the beginning of the Distemper : And in my Life never saw any one so grievously afflicted who survived it. All his Relations died of this Distemper. On the *tenth* Day from the Eruption the *second Fever* came on ; I prescribed *Paregoricks* to be taken every eight Hours, but to no purpose, since the Disorder encreased for two Days : Wherefore I applied Vesicatories, and frequently ordered him Clysters, especially between the Days of *purging* him. On the *thirteenth* he was let Blood, but without any advantage. On the *fourteenth* he was *purged* ; and in the Evening he took an *Anodine Draught* : The Fever continued, tho' not so violent. On the *sixteenth* he was again *purged* ; whereupon his Fever intermitted. I gave him *Anodines* and the *Bark*, yet still the Fever returned. Wherefore seeing Matters did not proceed to my Mind, and since I perceiv'd the Fever still continue, and his Appetite decay, and being now something emboldened by experience, on the second of *August*, and the *twenty second* Day of the Disease, I again advised *Purging*, notwithstanding all opposition. Then the Fever was wholly removed, his Appetite returned, his Strength was wonderfully recruited, and in a short time he grew fat and lusty.

*Case V. A. D. 1717. Aug. 24.*

**I** Was called to a Virgin sixteen Years old, on the *ninth* Day of the Distemper. She laboured under the truest sort of the *confluent Small-Pox* : She was just then seized with the *secondary Fever*. He that attended her being uncertain what to do, desired a Consultation. I, as soon as I was come, ordered her a *Clyster*, which brought away a great quantity of very fetid Matter, and greatly relieved the Young-Woman. On the *tenth* in the Afternoon I ordered a gentle *Purge*, much like that mentioned by Dr. *Levett*, in his Letter to you. This perform'd its Office so well, that the Fever never after returned ; tho' the Physician she first made use of, and the Nurse, exclaim'd loudly that I should kill her, as following a Method of Practice in the *Small-Pox*, which, as they affirm'd, no one ever attempted before.

*Case VI. A. D. 1717. Decemb. 5.*

**I** Was called upon at Midnight to visit a Man in his eight and thirtieth Year, who lay ill of the *Small-Pox*, it was the *eleventh* Day of the Distemper, and all the People about him imagined him to be just at the point of Death. I had before, I own, on the *ninth* Day, ordered him a *Clyster* in the Evening, and a *Purge* to be given him the next Day, to prevent, if possible, any Accident which might  
rea-



reasonably be expected in this inflammatory and *confluent* Kind, which he laboured under, (besides that he was violently and almost continually afflicted with an Asthma): However, neither of them was done, since he lived nine Miles from me, and I could not see that my Orders were obey'd. Upon coming to him, I found, to my great Surprise, his Pulse so vehement and quick, that I had never known the like before. He had lost all his Senses, so that he neither knew any Man, nor any one thing: Therefore I immediately applied three *Blisters*, gave a *Purge*, and ordered fourteen Ounces of Blood to be taken away. A Vein was opened forthwith, and the Blood rushed out with as much violence as from the Vein of an Horse; and I am confident the afore-said quantity ran out in a Minute. Within three Hours he began to know the People present; and after two or three Stools the Fever was much mitigated, and the next Day about Noon (being twelve Hours from Bleeding) it entirely vanished; and the Man was perfectly recovered, to the admiration of all the Neighbourhood.

I could relate to you many Cases parallel to those beforementioned, if I did not think these sufficient to evince what great advantage might be afforded by Evacuations, and particularly such as are effected by the help of *Purges*, in the *confluent* kind of the *Small-Pox*, when the *secondary Fever* has seized the Patient.

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I will only add, That, as far as I can gather from Observation, Bleeding ought by no means to be instituted in the forementioned Cases, either in elderly Men, or hysterical Women; for I have found it attended with very ill Success; but the whole Affair is to be committed to *Purges, Clysters, and Vesicatories*. And indeed I have lately been present two or three times in the like Cases, where a fainting and perpetual Languor have attended the Patients, no Medicine availing any thing, even to the last.

Ashford, Sept. 19.  
1719.

I am, &c.

JO. BATE.



A N

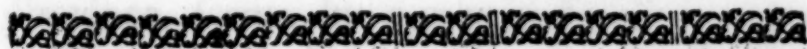


A N  
EPISTLE

T O

*Dr. Richard Mead.*

Concerning some particular kinds of  
the SMALL-POX.









## To Dr. *Richard Mead.*

**E**Njoying, Sir, unexpectedly, abundance of Leisure, and my Mind being, even in this Confinement, not over solicitous, I thought I could not better employ my vacant Hours, than in cultivating my former Studies, and adding a few Observations to what I have already writ concerning *acute Diseases*. And indeed I the more willingly undertake it, since I learn from that elegant Book concerning the *Small-Pox*, which *Helvetius* has lately presented us with, that that learned Author has either trod in our Steps in his Method of Cure, or at least set out in the same Road with us. I read that Work over, I cannot say, whether with greater Eagerness or Pleasure. So diligently has this learned and experienc'd Practitioner traced out the various and greatly dissimilar kinds of the *Small-Pox*, so wisely deliver'd the whole Method of Cure, that he alone has happily supplied many things which have hitherto been wanting in the generality of Authors. But neither has this Gentleman explained every thing so fully, but that this Province, seems, by a certain Fatality, to be reserved for you, Sir; namely, that you should, one day, give us a full and compleat account of the nature and difference of the *several kinds* of

of the *Small-Pox*; a Work which I know You have long since undertaken.

This, however, I write particularly to You, not so much to prevent, as to hasten your Design; for contenting myself to have touched but slightly upon one or two Cases, I shall leave the Subject entirely to You.

The generality of Writers, as they have affirmed the *distinct* kind to be void of danger, so have they talked of it as a certain nine-days Work, which Nature will compleat of itself, without any assistance from Medicine. But oftentimes this happens quite otherwise, as is proved both from Experience, and remarked also by *Helvetius*; who has observed, even within this Species, certain Signs of *Malignity*, and a certain continual Fever, different according to the nature of the malignant Humour. And this kind of *Small-Pox* he has indeed clearly explained<sup>a</sup>: However, there is yet a *distinct* Sort, which, tho' they may want the Signs described by him, bring the Patient into great danger of his Life.

Give me leave to confirm this Matter by Examples. A Youth about eleven Years old was seized with the *Small-Pox*, so favourable indeed, that since there were not hardly forty Pustules over his whole Body, he would not be confin'd to his Bed, but play'd and ran about his Chamber every Day. No Disorder in the least happened, till on the *ninth* Day the Pustules dried up according to Custom. Then a  
vicio-



violent Fever seized him of a sudden : So that being then first sent for, I found him both Convulsed and labouring under a Lethargy. As I imagin'd this Disorder to arise from the Relicks of the *Small-Pox*, reabsorbed into the Blood, either by Cold or some other Accident, so I attempted to cure him by *Evacuations* chiefly, and *Blisters*: Therefore, after the *seventh* Day, the Fever, and the other Disorders which attended it, were entirely removed, tho' with the greatest difficulty. However, the Tragedy did not end thus; for another new Calamity arose entirely unexpected. His Nerves were so relaxed, that his Limbs, from the Loins to the Toes, wholly lost their Motion. Neither did his blooming Youth, or the force of Medicine, free him from this melancholy Circumstance, till after half a Years trial. Such indeed is the Infirmary of the human Body, that being infected sometimes with even the slightest taint, either thro' Error or Carelesness, it is obnoxious to the greatest dangers. Wherefore he may conclude, that he has made no small progress in the knowledge of Diseases, who has not overlooked the meanest things.

Besides, in this *distinct* kind there is found both a manifold variety in the Pustules, and great difference in the Disease itself; where the Fever runs sometimes as high as in the *confluent* Sort, and the danger is equally threatening. That Fever indeed which *Helvetius* tells us<sup>a</sup>; resembles a *Tertian*, and wears off in a certain  
[period

period of Time, I have never yet observed in the *distinct* kind. But there is a time when Nature is not strong enough to ripen the Pus, as it should be; and the Pimples after the *fourth* Day, are so far from assuming a florid, that is a natural Colour, and swelling with a thick and digested Humour, such as Pus should be, that they contain nothing but a pale, thin and pellucid Water; whence this Sort is called the *Chrystalline*. Which belongs not only, according to *Helvetius*<sup>a</sup>, to the *confluent* Sort, but sometimes also to the *distinct*. It happens also, from the crudity, I suppose, of the Distemper, that not the least drop of this Lymph oozes thro' the Skin; there arise only some round, concave, empty, soft Pellicles, after the manner of Bladders, tho' they sometimes grow more solid and horney. Since this Name is given by *Botanick* Writers to some Plants, from the likeness of the thing, I do not see why we may not properly call this Species of the *Small-Pox* the *Siliquose*. There is another kind, I am speaking of the *distinct* Sort, in which there is neither any Vacuity or Lymph in the Pustules; for Nature protrudes certain Tubercles which rise above the Skin, and which (as I have shewn in another place<sup>b</sup>) greatly resemble *Warts* in hardness. These generally preserve the same appearance and the same figure unchangeably from the *fourth* Day, to the end of the Distemper. Since this Disorder is so very uncommon, I will illustrate it by a very singular Instance.

A Man

A Man in the full vigour of his Age seem'd to be taken ill, as if he had caught Cold. The Glands, particularly the *salivary*, were obstructed : He was suddenly seized with hot and cold Fits alternately ; and felt a most acute Pain in his Limbs, but especially in his Head : He had a pulsation in his Temples, and a ringing in his Ears. Besides, what is commonly, and perhaps not unjustly, taken for an ill Omen, his Mind was seized with a dread upon this very account. But upon a seasonable application of *Evacuants* (in which the manner of the following Cure almost wholly depends) things took a turn for the better ; and [the *Small-Pox*, which were now just at hand, came forth very gently ; their Colour, was, as it ought to be, vivid ; their number not so great, but that, since they were distinct, large spaces were left between them, not only on the rest of the Body, but also on the Face itself.

The *third* Day from the Eruption he was something relieved ; so that the Pains of his Head, together with the other Disorders, left him.

On the *fourth*, every one with pleasure prophesied his Recovery, the Patient being in but little danger from the Number, seeing the other Symptoms proceeded rightly. Neither had the learned Physicians then present any reason to form a less favourable Judgment. For the *Small-Pox*, considering the

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time



time of the Eruption, began to swell to a due height ; but the Patient could not get any Sleep. But in the Evening indeed things appeared worse ; for being gradually disordered in his Mind, his Speech was now and then incoherent. In the same manner he also passed the *fifth* Day.

On the *sixth* the Pustules continued of the same Colour and Size ; the like rambling and disorder in his Mind ; for tho' he could readily distinguish Voices and Faces, there was, at times, no end of his prating in a delirious manner. His Eyes were glassy, sparkling, and perpetually rowling, and their Vessels greatly tumified with Blood. Sleep, that refuge of all Care and Labour, was entirely wanting. However, there was not that irregularity in his Pulse, as might be easily expected from such an obstinate Watching. Besides, there was hardly any appearance of a Fever from the temper of his Body.

The next Night he was very restless and uneasy : He was much terrified at the apprehension of imaginary Appearances ; so that one would think him not only Delirious, but entirely raving Mad. So that now there was neither room for Diet or Medicine.

On the *seventh*, the tenour of the Pustules was the same. But neither they, nor the interjacent Vacancies were any way swelled. Not one drop of Pus appeared ; you would imagine them to be *Warts*, some flat and others

thers prominent. Neither did the progress of the Distemper make any the least Alteration in them. His Pulse was tolerably strong, and, as any one would easily believe, more regular. No appearance yet of *Petechial* Spots, as it sometimes happens: No *Ptyalism*, which I have observed sometimes (even contrary to the common Opinion) in the *distinct* Sort, when they have been thicker than ordinary; neither was there any large flux of Urine: This indeed, thro' the whole course of the Distemper, was limpid, thin, and inturbid; namely, such as is peculiar to Persons in a *Phrenzy*. *Vesicatories* were applied, *Clysters* injected, *Cupping-glasses* applied; and, lastly, *Blood* was drawn out of the Jugular Vein. For in this doubtful Case, there is no time to deliberate about opening a Vein; neither was there any Matter in the Pustules which might fall in. In like manner, as in the *Measles*, when the *Lungs* are begun to be inflamed, we wait in vain till the Pimples are decayed: For if we have a mind to cure the Patient, let it be on what Day it will, we must bleed boldly the very first opportunity. That being the most expeditious way of making a *Revulsion*. And how much the opening the *Jugulars* is to be preferred to any other, even to those in the *Feet*, when the Brain is affected, I have already shewn.

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By

By this last Method of Relief He was so much composed to rest, that, obeying the Standers-by, He took what was offered him. But neither yet was his Mind perfectly settled; neither had He left off trifling and muttering, or else bawling aloud. Thus his idle fluency of Talking continued to the last. There was likewise another Misfortune, that whatever use we made of *soporiferous* Medicines, which is particularly necessary in all *phrenitick* Cases, sleep was very difficultly attained. For He scarce slept an Hour or two even till the *eighth* Day. The colour of the *Small-Pox* was still vivid; neither did they begin to grow pale, till just at last. These, therefore, and other Methods of Cure, being made use of to no purpose, since He past *three* Days between *Tremors* and *Deliria*, and being seized with a Feverishness, He died on the *tenth* Day from the eruption of the *Small-Pox*.

His Head being opened, the Vessels of the Brain were so immoderately swelled and loaded with Blood, that there would certainly, in a short time, have been danger of their bursting. And thus they are very often burst, when the malignity of the Distemper seizes the Head more particularly than any other Part, we may learn from the dissecting of dead Bodies.

You observed, Sir, how well the exterior Appearance of the *Small-Pox* promised; for at  
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the beginning both the morbid Matter seem'd very moderate, and the Signs not in the least pernicious. But how obstinate the malignity of the Distemper was inwardly, we are assured from the unhappy Event. Thus, even in the *distinct* Sort, the Physician will be cautious, and not, because they are *distinct*, confidently affirm there is no danger; since there is something in this very Kind, which will often elude his Sagacity, and his utmost Skill in the Art of Healing. As to what regards the several Species I have been treating of, I would not be understood to mean some particular Pustules which are here and there irregularly mixed with the *distinct* kind, but when they being thrown out upon the whole Skin, put on the same appearance, and preserve the same tenour. When this, I say, has once been the condition of the Pustules, whether they be *Chrystalline*, or *Siliquose*, or even *Verrucose*, the Disease, as far as I have learned from Experience, is hardly ever free from danger. I shall leave it to you, Sir, to explain by what means Art may so far relieve impotent and decay'd Nature, that the Patient may be rescued from these dangerous Circumstances. For if any are so prejudiced, as to think this or that Method of Cure is perpetually to be persued, they are, without dispute, extremely deceived. For a different kind of Cure ought to be followed; one while the milder *Cardiacks* ought to be used; another

which even they ought to be neglected: Sometimes we ought wholly to trust to *Evacuati-  
ons*; at other times we ought to be very sparing in the use of them. In some Cases it is proper to procure Sleep by all possible means; in others, however similar, wholly to abstain from it. Sometimes it is convenient to observe the particular state and times of the *Small-Pox*; at other times it will prove altogether useless. For frequently in these Cases the experienc'd Practitioner ought to regard not only the Pulse, (the force of which at certain Seasons, as some too easily overlook, others, tho' they have grown old in touching it, do not in the least understand) but particularly the *Breath*; and from thence take his chief Indications of cure. You, Sir, according to your abundant Experience, will set this whole Affair, either with regard to the Difficulty or the Judgment, in a clear Light: For we seem justly to expect, that by your Lucubrations, you will teach others also how to attain this nicety of Art.

But to return to the Argument, A *Delirium* is a Symptom common to the *Small-Pox* at the beginning, and about the encrease; and is not of itself fatal. But here you may observe the Distemper took another turn, and that the *Phrenzy* did not come on till the *fourth* Day after the Eruption of the Pustules: and indeed when it, at this time, supervenes the coming out of the *Small-Pox*, I judge it such an ill Omen, that I hardly ever knew any one in these  
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Circumstances recover. You see how wide these Species are from those, which *Sydenham* has rather hinted at than expressed, by the Name of *Distinct*. He has hardly described any but the most favourable of all: in these, since the form of the Distemper is very dissimilar, and the importance of the Times very different, another manner of Cure is also to be observed.

There remains also another Species, for the most part indeed an attendant upon the *confluent* Sort, however, not so constantly, but that it sometimes happens to the *distinct*. This kind of *Small-Pox* is the most pernicious of all: I mean that Sort, wherein the Blood being dissolved, is discharged through the several Passages of the Body; one while, for instance, by the *Mouth*, at other times by *Urine, Stool, &c.* I have seen a Woman who was seized with a sudden Eruption of the *Small-Pox*, without any other Disorder, they were indeed *distinct*, tho' numerous. Every thing succeeded well for *two Days*; the Pustules were both moderately elevated, as also well coloured and florid. But in the space of one Night, they universally turned livid and purple; ill Omens of a fatal Event: For there arising a profluvium of Blood, thro' the *urinary* Passages, She in a short time expired.

I have likewise seen this Disorder destructive, even when the Sort has been *coherent*, and the Patient very robust. There was nothing



thing singular before the Eruption, only the usual Symptoms preceded. The *Small-Pox* being come out, all things were quiet; neither was the Patient any ways aggrieved. The Pustules were depressed, but yet raised above the Skin, after the manner of *Warts*: Not the least sign of any Pus: And among these there arose here and there other Pustules, as well *Chrystalline* as *Siliquose*. But the appearance of the Pustules continued altogether the same for *eight* Days. However neither yet was there the least Fever. On the *second* Day he spit up Blood without any Pain or Cough at all, and the Blood continually held this course; so that a Pound, at least, was daily discharged. The Patient, in the mean time, as he preserved his Senses entire, fancied likewise that his Strength was not in the least abated. He was blooded two or three times; and that Method of Cure which is peculiar to the *Arabians*, consisting of *Astringents* and *Acids*, and which is well suited to this Kind, was made use of to no purpose. For on the *eighth* Day he voided a large quantity of Blood by Stool: Under which the Patient gradually sinking, placidly expired.

But of all the Cases which I ever attended in this Kind, give me leave, Sir, briefly to relate, one which was singularly remarkable and uncommon. A strong and adult Woman fell ill of this Distemper: For besides that her Fever was something violent, she had a fixed Pain at the

the bottom of her Back, as if she had been sawed with a Saw : Such a Pain as *Rheumatick* Persons feel in that Species of the Disease, which by Physicians is called a *Lumbago*. Neither was there any abatement of these cruel Pains for *three* Days together. At last the *Small-Pox* unexpectedly appeared, small, shining, and inflammatory ; they were crowded indeed, however at such equal distances for the most part, that they were seldom contiguous. In this state the Pustules continued for *two* Days together. And on the *third* the Fever and the Pain entirely vanished together. On the *fourth* the Pustules were something more inclinable to a livid Colour, and the Blood broke forth very forcibly and in great quantity by the *urinary* Passages ; neither was this Disorder suppressed on the two succeeding Days : For on the *sixth*, when the Strength was worn out, by the Blood being almost exhausted, and the generality of the Pustules (as far as was perceivable by the Eye) burst of themselves, as if they had been pricked with a Needle : From which, as from a *Center*, exceeding small *Tracts*, distinguished with Blood, were drawn after the manner of *Radii*. Therefore Death, and that no difficult one, shortly ensued.

And I have constantly remarked in this Species, that tho' the *Small-Pox* come out *one* while without the least Disorder, at other

other whiles not without the extremest Anxiety ; yet the Patients have, on the last Days, been entirely free, both from Fever and Pain, as well as any disorder in their Senses. But alas ! fallacious are these truces of Rest, and all our Endeavours to no purpose ! For never any one, let what Methods of Cure soever be attempted, at least, as far as I could find, surmounted the difficult Circumstances attending this Distemper.

But enough of these calamitous Cases. For I am afraid You will think I have sent You a Volume, instead of an Epistle. And indeed all my design was only to hasten Your Undertaking upon this Subject. You have many Observations concerning the several Kinds of the *Small-Pox*, and their various Courses ; and you can add many things from your own Stock, concerning the best Method of Cure : Which, since they have been hitherto almost wholly untouch'd by others, You, I hope, will soon oblige the World with something perfectly finished and compleated.

Dear Sir, farewell, and be assured, that wherever I am, it shall never be in the Power of Fortune, to efface that Remembrance of Your Friendship, which Gratitude obliges me to preserve.

March 30. 1723.

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P O S T S C R I P T.

I write this with the Permission, and even Indulgence of the *Governour*, in the Presence of the *Warden* : Who, as He does not much assist me in Writing, prevents my being more prolix ; which, I suppose, will not be displeasing to You.

F I N I S.



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